Science
Library

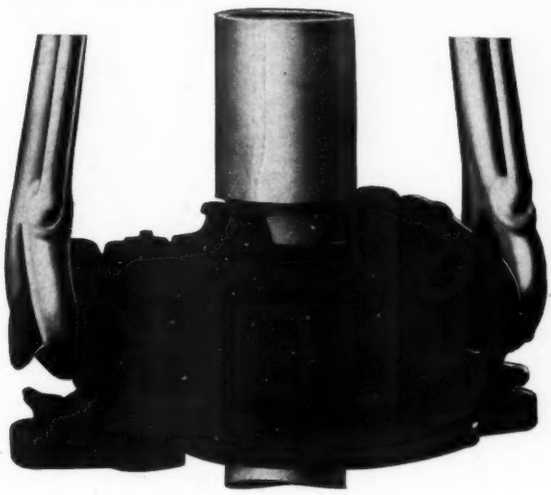
the OIL AND GAS JOURNAL

JUL 18 1937

JULY 15
1937

PRICE
25 CENTS

YOU CAN SET CASING SAFER & FASTER WITH THESE



BJ ELEVATORS

BJ SIDE-DOOR
SLIP CASING ELEVATOR

Safely handles the longest string of pipe with four long slips which grip at any desired point. No weight is carried by the coupling or collar.

It is so simple and easy to operate that only one man is needed on the derrick board when setting casing. Side-door construction permits removal without disturbing circulating or cement heads.

Details are shown on Pages 370-372 of the 1937 Composite Catalog; and in the BJ Catalog, free on request.

Slips are instantly set at any desired point with this lever.

Sliplock set to hold slips positively set against the pipe.

Perfect balance is insured by the large, adjustable balancing block.

BJ TYPE J
SINGLE JOINT ELEVATOR

Hundreds of these elevators have been sold during the past few months, due to their safety and efficiency, for "tailing-in" casing and hoisting it into position. The elevator is attached to the hook or to the large elevator, and while the slips are being set in the spider, one of the crew closes this light-weight elevator around the next joint on the derrick floor. When the block and hook are raised, the casing is lifted to the required height, where it hangs vertically for lowering into the coupling.

You can thus eliminate danger from having a rope sling slip, or from having the casing damaged or the crew injured by pipe hanging at an angle.

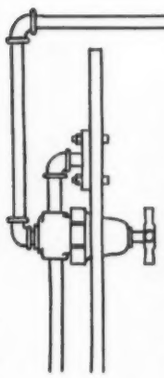
BYRON JACKSON CO.
FORT WORTH • LOS ANGELES • NEW YORK

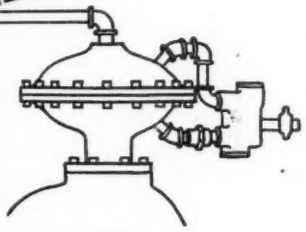
BJ
DRILLING AND PRODUCTION TOOLS

FINGER TIP CONTROL

with

EMCO PILOT LOADING REGULATORS





Progressive gas companies are now using "switchboard control" for dispatching gas—a method made possible through EMCO's advances in pressure regulation. Complete and accurate control, within ounces, for the high pressure distribution mains illustrated above, is obtained through the use of the EMCO Pilot Loading System. The Pilot Loading Regulators, located at the control panel, accurately govern the loading pressure on the main regulator diaphragms and permit the outlet pressures at the main regulators to be varied by finger-tip control from this central point.

The EMCO Pilot Loading System is fully described in our Bulletin No. 1006. Write for your copy.

PITTSBURGH EQUITABLE METER CO.

MERCO NORDSTROM VALVE CO.

MAIN OFFICES PITTSBURGH, PA.

ATLANTA · BUFFALO · CHICAGO · MEMPHIS · NEW YORK · COLUMBIA · KANSAS CITY · PHILADELPHIA · TULSA · HOUSTON · LOS ANGELES · OAKLAND

the OIL AND GAS JOURNAL

PUBLISHED WEEKLY BY THE PETROLEUM PUBLISHING COMPANY AT TULSA, OKLAHOMA

VOL. 36, NO. 9 JULY 15, 1937

P. C. LAUINGER
President

C. O. WILLSON
Editor

W. T. ANDERSON *Managing Editor* — JAMES McINTYRE *Consulting Editor*

W. T. ZIEGENHAIN *Engrg. Editor* — L. G. E. BIGNELL *Prod. Engrg. Editor*

C. K. FRANCIS, Ph.D. *Technical Editor* — W. L. NELSON *Metallurg. Editor*

Associate Editors

T. F. SMILEY — DAL DALRYMPLE

D. H. STORMONT — T. P. SANDERS

PAUL REED

District Editors

Houston
Sterling Bldg.
NEIL WILLIAMS
GEORGE WEBER — F. L. SINGLETON

Fort Worth
L. E. BREDBERG
Petroleum Bldg.

Shreveport
MITCHELL TUCKER
City Bank Bldg.

Los Angeles
L. P. STOCKMAN
Union Oil Bldg.

Washington
HENRY D. RALPH
Natl. Press Bldg.

Saginaw
O. C. PRESSPRICH
Saginaw News Bldg.

Denver
T. R. INGRAM
State Office Bldg.

New York City
H. STANLEY NORMAN
415 Lexington Ave.

Oil City
J. P. O'DONNELL
Derrick Bldg.

Toledo
G. A. WHITNEY
P. O. Box 98

Chatham, Ontario
V. LAURISTON
Box 136

•

S. H. ROURKE
Business Manager

M. F. BALDWIN
Circulation Manager

•

Advertising

ERNEST KLAPPENBACH
Advertising Manager

New York City
C. L. CAIN
415 Lexington Ave.

Cleveland
HOWARD MARKT
Leader Bldg.

Chicago
C. R. FARMER
300 W. Adams St.

Tulsa
K. J. LANGLEY
114 W. 2nd St.

Houston
WAYNE RIVES
Sterling Bldg.

Los Angeles
J. H. TINKHAM
1406 S. Grand Ave.

Cologne, Germany
A. J. CHAMBERS

Table of Contents

NEWS DEVELOPMENTS

Summary 35

Geophysical Results Spur to Further Exploration—*By Neil Williams* 36

Sparks From the News 38

Bureau Finds Practically All Stored Crude Merchantable—*By L. G. E. Bignell* 39

Flush Fields in Arkansas Keep Conservation Board Busy—*By Mitchell Tucker* 41

Deadlock in Senate May Hold Up Legislation—*By Henry D. Ralph* 43

Editorial 44

California Has Good Year, but Reduced Activity Seen—*By L. P. Stockman* 45

New Jersey Standard Enjoined in "Esso" Trade Name Case 49

News from Foreign Lands 51

Pipe Line Activity 52

Natural Gas News 52

Refinery Expansion 53

Natural Gasoline 53

Mid-Continent Refinery Runs in July Exceeding 600,000 Bbls. Daily—*By D. H. Stormont* 80

ENGINEERING—OPERATING

Handling Drill-Cutting Samples an Organized Field Procedure—*By Paul Reed* 56

Pure Oil Using Three Furnaces on New Combination Unit—*By George Weber* ... 60

Operating Ideas 63

Fundamental Mechanism of Solvent Oil Refining—*By John W. Poole* 64

Revamp East Texas Line to Gain Greater Efficiency—*By Mitchell Tucker* 68

Shell Portable Rig Completes Four Wells in 38 Days—*By T. P. Sanders* 69

X-Ray Examination of Pressure Vessels Safeguards Refining Industry—*By W. L. Nelson* 71

Low Lubricating Oil Loss Is Feature of New Lion Oil Vacuum Filter—*By J. J. Allison and J. B. Rogerson* 73

Questions on Technology — *By Dr. C. K. Francis* 77

Problems From Readers—*By L. G. E. Bignell* 79

FIELD OPERATIONS

Field Operations Summarized 83

Southwest Texas—*By George Weber* 84

Michigan—*By Otto C. Pressprich* 86

Eastern Fields—*By Staff Correspondent* .. 88

Gulf Coast—*By F. L. Singleton* 89-108

East Texas—*By L. E. Bredberg* 90

Kansas—*By Dal Dalrymple* 91

Central West—*By George A. Whitney* 93

Oklahoma—*By Dal Dalrymple* 94

North Louisiana - Arkansas — *By Mitchell Tucker* 97

California—*By L. P. Stockman* 99

West and North Texas—*By L. E. Bredberg* ..101

Kentucky 102

Rocky Mountain Area—*By Tolbert R. Ingram* 103

Canada—*By Victor Lauriston* 110

MARKETS AND PRICES

Crude Prices 100-130

Personal Paragraphs 124-125

Group 3 Market—*By D. H. Stormont* 126

A.P.I. Refinery Report 127

New York Market—*By H. Stanley Norman* ..127

Tank-wagon Markets 128

Refinery Prices 129

ADDITIONAL FEATURES

Obituaries 49

Service on New Fields: Lisbon Field of Louisiana appeared in issue of July 8 ..65-66

Field Summaries for June 111

Wildcat Operations 113-121

Record of Oil Securities 123

Do You Remember? 124

New and Improved Equipment 131-132-133

Oil Man's Calendar 134

Classified Advertising 134-135

Advertisers' Index 136

Rates: Domestic, 1 year, $6.00; 6 months, $3.00. Canadian and foreign, 1 year, $7.00; 6 months, $3.50. All subscriptions are payable in advance. Extra copies of special issues are reserved for subscribers' needs and may be purchased by subscribers at the price of 50 cents per copy.

Copyright, 1937, by The Petroleum Publishing Company

STA-VOL-ENE
STABILITY VOLATILITY ENERGY
IT'S A "NATURAL"

thats OUR LINE

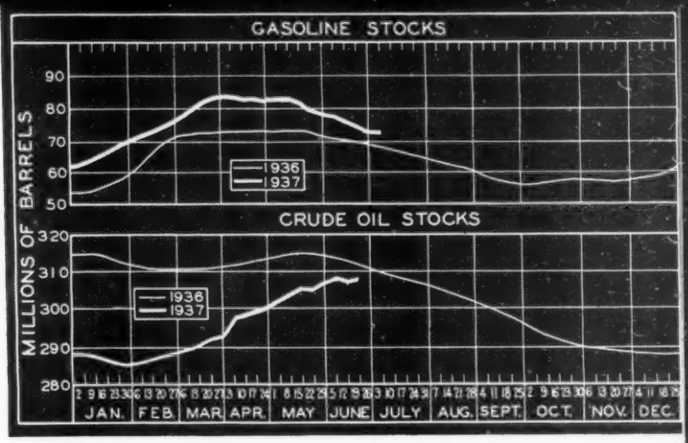
Hanlon-Buchanan, Inc

PIONEER NATURAL GASOLINE MANUFACTURER

EXPORT TERMINALS:
Goodhope, La.
Houston, Tex.
Corpus Christi, Tex.

TULSA, OKLAHOMA
NATIONAL BANK OF TULSA BUILDING
PHONE 4-1101 or L.D. 398 WIRE — OR WRITE P. O. BOX 1559
Cable Address STAVOLENE, Tulsa, U. S. A.

FOREIGN REPRESENTATIVE:
Banks, Williams & Co., Ltd.
4 Lloyd's Ave.
London, England



Minor Rise in Crude Schedules

MOST of the developments of the past week were on the favorable side. They served to bring to the fore again the question of whether or not generally higher prices for crude oil and refinery products will materialize before the end of the summer. In crude schedules buyers made minor price adjustments upward in a few fields in Gulf Coast and Southwest Texas with a 5-cent increase effective in the more important Wilmington, Calif. field. In all cases the advances applied to the low-gravity schedules. The changes were another indication of the relatively strong position of low-gravity crudes. The scarcity of practically all grades of fuel oil, particularly at coastal points along the Gulf and Atlantic seaboard is reflected in a greater demand for the crudes of lowest gravity. Some of the crudes are selling below the residual fuel prices for tanker shipment at Gulf Coast terminals.

CRUDE PRODUCTION *3,529,608 barrels daily average—down 9,947 barrels.*

CRUDE STOCKS *307,465,000 barrels as of June 19—up 266,000 barrels.*

GASOLINE STOCKS *73,976,000 barrels as of July 10—down 1,354,000 barrels.*

REFINERY RUNS *3,325,000 barrels daily average past week—up 55,000 barrels.*

In the refinery division the general advances in gasoline tankcar and posted dealer schedules made effective Tuesday by the Standard of New Jersey in eastern and southeastern states were considered significant. It is the first general advance in motor fuels in several weeks affecting a large area. It is in contrast with the half-cent reduction in dealer and tank-wagon prices early in June throughout the Middle West. Gasoline along the Atlantic seaboard has been particularly strong, starting early in the year and the advances of Tuesday which are being met by other companies, have the support of a strong statistical position. Export gasolines are also strong.

With a small reduction in production last week the existing relationship between current supply and demand for crude oil is also considered encouraging. The spread between national crude oil production and demand as estimated by the Bureau of Mines is the lowest in many months.

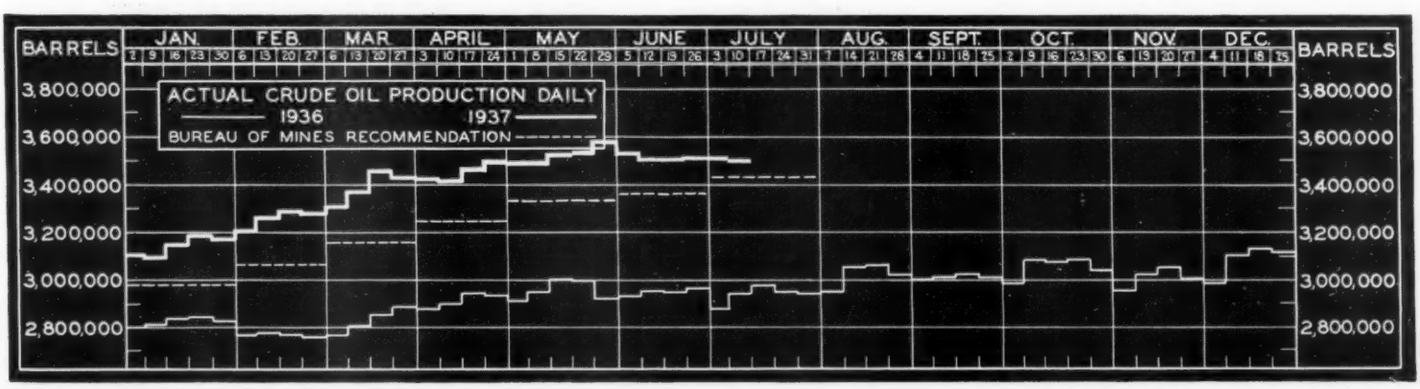
The significance of this situation has been seen in recent stock figures. For the three weeks ending June 19, crude stocks increased 1,720,000 barrels. This average increase of 82,000 barrels is substantially less than the average gain of the previous four months. With a gain in crude requirements assured for July, a balance between supply and demand is obtainable provided output is maintained at its prevent levels.

Drilling programs which have been approved indicate that the second half of the year will be fully as active as the first. Areas which will be particularly active are western Kansas, West Texas and North Louisiana-Arkansas. In California over a hundred operations are under way in the Wilmington field.

Daily Average Production for Week

	July 10, 1937	Bur.Mines July est.	July state allowables	July 3, 1937
Oklahoma City	149,150	.....	.....	160,575
Fitts	85,450	.....	.....	91,500
Remainder of state	383,900	.....	.....	367,525
Total Oklahoma	618,500	629,700	629,700	619,600
East Texas	474,800	.....	.....	472,015
West Texas	199,796	.....	.....	201,245
North Central Texas	106,798	.....	.....	106,297
Texas Panhandle	68,850	.....	.....	85,990
East Central Texas	122,589	.....	.....	125,692
Gulf Coast—Texas	340,947	.....	.....	333,196
Southwest Texas	104,899	.....	.....	103,787
Total Texas	1,418,679	1,375,100	1,385,100	1,428,222
North Louisiana	85,965	.....	.....	88,295
Gulf Coast—Louisiana	168,500	.....	.....	178,314
Total Louisiana	254,465	253,000	263,000	266,609
California	667,750	605,500	605,500	655,750
Kansas	192,175	195,600	195,600	193,000
Arkansas	28,085	28,400	.....	28,335
Eastern Fields	122,900	122,100	.....	120,025
Michigan	42,792	39,800	.....	43,094
New Mexico	114,612	100,800	114,500	114,730
Rocky Mountain area	69,650	73,800	.....	70,190
Total United States	3,529,608	3,423,800	.....	3,539,555

Decrease, 9,947 bbls. daily.



Geophysical Results Spur to Further Exploration

By NEIL WILLIAMS

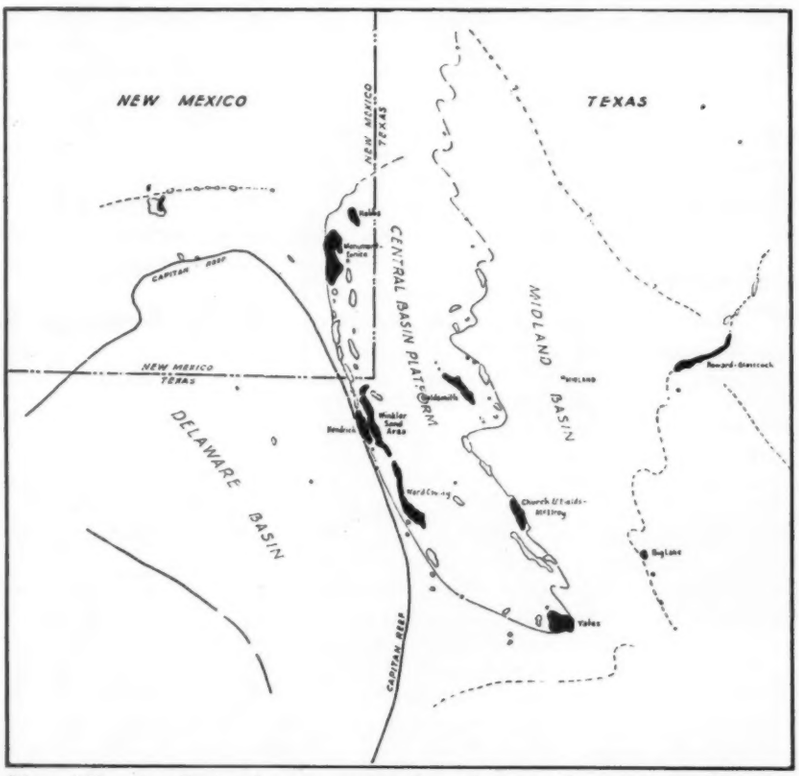
MIDLAND, Tex.—The increasing number of fields in the Permian Basin of West Texas and Southeast New Mexico whose discovery can be attributed directly to geophysics is proving an incentive to more intensive geophysical exploration. This is reflected in the steadily growing list of geophysical crews working in that district.

Recent reports reveal 30 geophysical crews with various types of instruments active in the district. This is the largest number ever reported. Other crews which have been working throughout that general area but which happened to be in adjacent counties when the report was made are not included in the list.

Additional crews are being moved into the district. Several have been transferred lately from the Gulf Coast.

Crews operating in the Permian Basin are listed in accompanying tables. It will be noted that seismograph crews are in the lead with a total of 17. Reflection shooting is the most general method although some refraction work is being done by two companies. Included in the list are six torsion balance, four gravitometer, one magnetometer and two electrical instrument crews.

Difficulties and uncertainties which have been attached to geophysical work in the Permian Basin have been a handicap to the general adoption and spread of this exploration. It has been only within recent years, due to improved instruments and methods and with a better understanding by operators of conditions and the significance of interpretations, that geophysical findings have been sufficiently reliable to justify more general application of the science.



Map of Permian Basin showing regional conditions.—(Prepared by Donald K. DeFord, The Mines Magazine, May, 1937.)

Geophysical Work Costly

Geophysical work in the Permian Basin still is costly and uncertain but with such fields as Hobbs and Monument, New Mexico, and Means to its credit the possibilities of geophysical exploration are recognized. Renewed impetus has been given to geophysics by such discoveries as Seminole, Gaines County; Hockley, Hockley County, and the very recent strike by Amon Carter and Continental Oil Co. in the Wasson area of northern Gaines County.

The latter three fields have been opened within the past year. So far the development of each has been limited so that their full importance has not been determined. Their discovery reflects the increasing effectiveness of geophysical instruments and methods in the district.

Areas in which these fields are located are a part of a group of undeveloped counties bordering to the north what previously has been designated as the West Texas district. Prior to the middle of 1936 no production had been found in any of those counties, and very little wildcatting had been done. Since that time production, or indication of production, has been found in a half-dozen different places, largely the result of geophysical exploration. Due to the limited drilling which has been done, those counties have offered an extensive virgin field for geophysics.

Hobbs, Lea County, New Mexico, holds the distinction of being the first geophysically discovered field. Midwest Refining Co., which drilled the discovery well, obtained its leases on the strength of a magnetometer survey made by W. H. Denning and C. A. Weintz in 1926. Before the discovery well was started in 1927, the magnetometer work was checked with torsion balance. Shell Petroleum Corp. about the same time worked the area with torsion balance and then with magnetometer, showing up the structure. Later the structure showed up also on reflection shooting.

Monument, also in Lea County, New Mexico, and Means, in Andrews County, West Texas, were opened in 1935. Original leases in each of these fields were taken, and the respective discovery wells drilled, on the strength of shooting and torsion balance work. These fields now are among the more important fields in the Permian Basin.

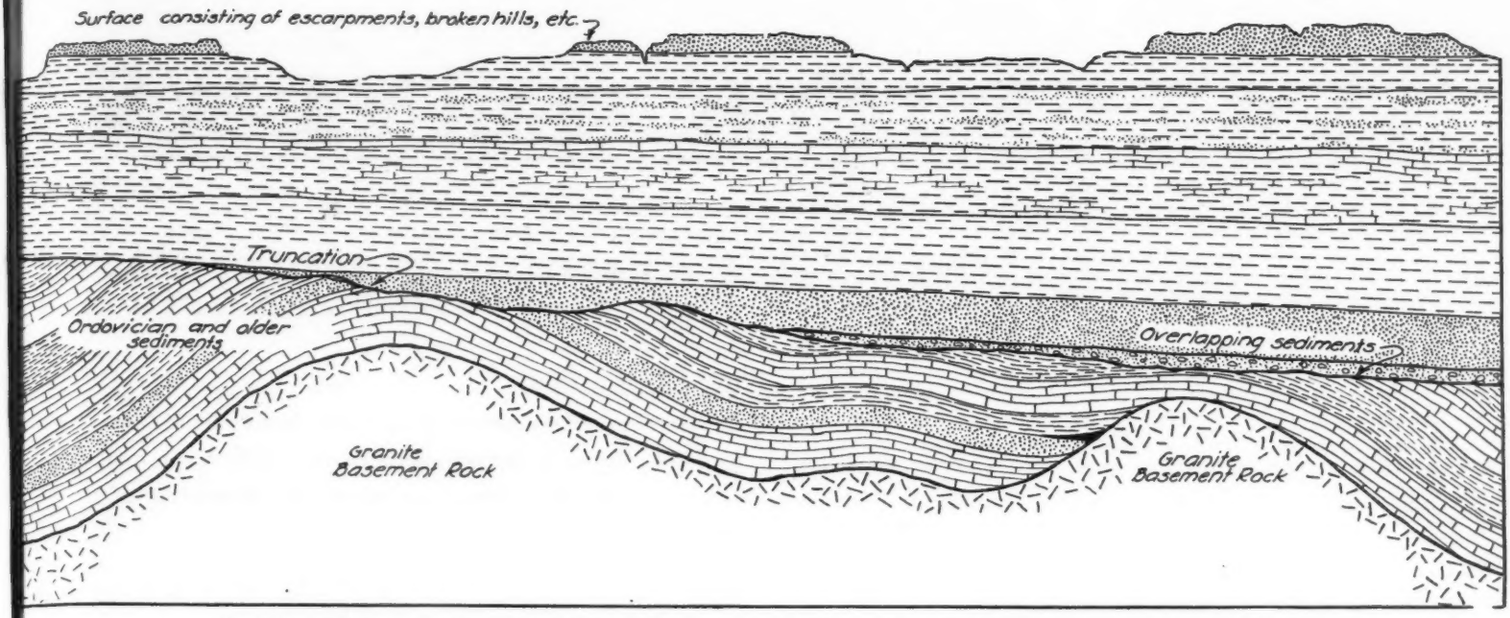
Seminole, controlled by the Shell Petroleum Corp., and Amerada Petroleum Corp.; Hockley, owned by the Texas Co., and the new Wasson strike by Amos Carter and Continental Oil Co., all showed up in reflection shooting.

Seminole, principal leaseholders of which are Shell Petroleum Corp. and Amerada Petroleum Corp., is a gravity picture, although it showed up in reflection shooting also. Hockley, a Texas Co. discovery, was revealed by shooting. The most recent strike by Amos Carter and Continental Oil Co. at Wasson is the result of shooting and torsion balance work.

Prior to 1928 the only geophysical work in the Permian Basin was with the magnetometer and

GEOPHYSICAL CREWS IN PERMIAN BASIN BY COUNTIES

County—	Seismograph	Torsion balance	Gravitometer	Electrical	Magnetometer	Total
Andrews	2	0	0	0	0	2
Bailey	1	0	0	0	0	1
Borden	0	1	0	0	0	1
Cochran	1	0	0	0	0	1
Crane	1	0	1	0	0	2
Crockett-Reagan	1	0	0	0	0	1
Crosby	0	1	0	0	0	1
Dawson	1	0	0	0	0	1
Ector	0	2	0	0	0	2
Garza	0	0	1	0	0	1
Hale	1	0	0	0	0	1
Hockley	3	0	0	0	0	3
Loving	0	0	0	1	0	1
Lubbock-Hockley	1	0	0	0	0	1
Lynn	2	0	0	0	1	3
Mitchell	1	1	0	0	0	2
Reeves	0	1	0	1	0	2
Scurry	0	0	1	0	0	1
Terry	1	0	0	0	0	1
Ward	0	0	1	0	0	1
Lea (New Mexico)	1	0	0	0	0	1
Total	17	6	4	2	1	30



Hypothetical cross section of Permian Basin area showing truncation and overlapping in the Ordovician

torsion balance. During 1928 and 1929 seismic exploration was introduced. This first work was by the refraction method. At that time reflection shooting had not been developed, and for reconnaissance work, such as was to be carried on in the almost virgin Permian Basin, refraction shooting was considered adaptable. This work was entirely unsuccessful, the failure being attributed to instrument imperfections and to inability of operators to correlate or interpret their findings.

GEOPHYSICAL CREWS IN PERMIAN BASIN BY COMPANIES

Company—	Seismograph	Torsion balance	Gravitometer	Electrical	Magnetometer	Total
Atlantic	1	0	0	0	0	1
Tide Water	2	0	0	0	0	2
Penn Oil Co.	1	0	0	0	0	1
Magnolia	0	2	0	0	0	2
Texas	2	0	0	0	0	2
Gulf	2	0	2	0	0	4
Humble	1	1	2	0	1	5
Amerada	2	0	0	0	0	2
Stanolind	2	1	0	0	0	3
I.T.I.O.	0	1	0	0	0	1
Sinclair	1	0	0	0	0	1
Superior	1	0	0	0	0	1
Getty Oil Co.	0	0	0	1	0	1
Continental	1	0	0	1	0	2
Klaus Exploration	0	1	0	0	0	1
Standard	1	0	0	0	0	1
Total	17	6	4	2	1	30

During the retrenchment period from 1930 to 1933 very little geophysical exploration was undertaken. Late in 1933 and in 1934, companies went back into the district with reflection shooting crews, following methods which had been used extensively on the Gulf Coast. Due to the multiplicity of reflection horizons and inability of operators to correlate them, this work also proved inapplicable and unsatisfactory. Several operators then tried some dip shooting. This was not generally followed. Although more favorable results were obtained than in previous exploration, this method also was not entirely satisfactory.

More recently, continuous profiling has been resorted to by various companies. Results obtained by this procedure have been very favorable. Locating of truncations and overlapping in the Ordovician, a basic objective of much of the exploration now under way, is believed possible only through this practice. However, this type of shooting is considerably more expensive and slower.

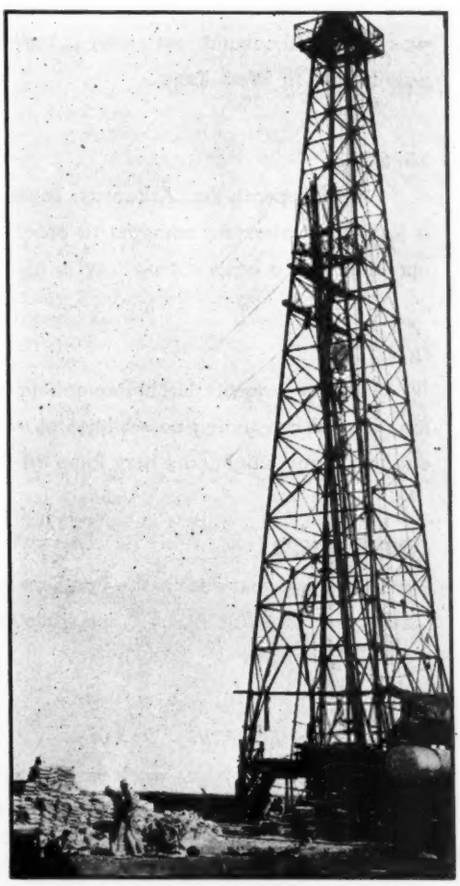
Unusual Difficulties

Unusual physical difficulties are encountered in carrying on seismic exploration. These problems have been a restraining factor in preventing a more widespread use of shooting. The cost of maintaining a shooting crew in the district under average conditions runs at least $13,000 per month, which is in contrast to a cost of from $7,900 to $8,200 on the Gulf Coast. Considering the uncertain results which have been obtained, this expenditure has been prohibitive to many companies.

Drilling of shot holes is a particular problem, and is a sizable item in shooting costs. On the surface of most of the district is a thick deposition of caliche rock, through which it is necessary to drill to place the shots. Depths of holes range from 100 to 200 feet. On the Gulf Coast 30- to 40-foot holes are ample in most instances, and on some jobs they are so shallow and digging is so easy that they can be dug manually. Formations in the Permian Basin are hard, which makes digging difficult and slow. It seldom is possible to drill more than one hole per tour per rig. On this basis, two rigs working two tours could make only four holes daily. In that district from three to five drilling rigs are needed for each shooting crew. This is in contrast to work on the Gulf Coast in which one rig ordinarily is ample to keep ahead of the shooting crew and instrument men. The extra rigs add materially to the costs.

Both rotaries and spudders are used for drill-

(Continued on Page 49)



Weighting material is stacked up to be pumped into this high-pressure well of the Shell Petroleum Corp., at Seminole, Gaines County, Texas, a geophysical discovery

Seventh of a Series on West Texas Operations

The accompanying article is the seventh of a series on West Texas by Neil Williams, staff representative. Mr. Williams spent several weeks in West Texas and New Mexico fields making a special study of developments in the Permian Basin, one of the most active oil areas. Additional articles will appear in later issues. The following have been published:

"Permian Basin Operations in New Mexico and West Texas Reach All-Time Peak," May 20 issue. "Careful Development Marking Goldsmith-Cummins Field," May 27. "Production in Permian Basin Nearing 1929 Top," June 10. "Repowering Trunk Pipe Line, New Mexico to Houston," June 24. "Permian Basin Recovery Has Been Improved," July 1. "Apply Zone Theory to Jal Production," July 8.

SPARKS FROM THE NEWS

RIGHT REACTION

The recent small increases in price in some grades of oil in the Gulf Coast, Southwest Texas, and in Wilmington, Calif., add a little to the spirit of optimism prevailing among producers.

REFRESHING

Out of the maze of complicated court opinions comes one refreshingly clear decision, to-wit: It isn't stealing to catch the drip gasoline from a leaking natural gas line.

DIFFERENCES

A half-cent advance in eastern and southeastern gasoline prices, following a decline of half-cent in Middle Western states, reflects a difference of opinion regarding basic conditions in the oil business by major operators—also incidentally a one-cent difference in price.

BENEATH SURFACE

It took geophysicists with instruments which indicated what was several thousand feet under a barren surface to see the possibilities in West Texas.

TRI-STATE

It now appears that Arkansas, Texas and Louisiana need a miniature interstate compact in order to continue Rodessa operations on a basis satisfactory to all concerned.

COLD WATER

A reader suggests that before getting too enthusiastic about the gasoline-consuming possibilities of trailers someone figure out how many single cars they keep off the highways.

ORIENT HELPS

Expanding markets in the Far East are one reason California operations are in fair shape statistically, despite a large increase in output.

NARROWING MARGIN

Crude oil supply last week was closer to Bureau of Mines estimated demand than in any other period this year.

GETTING SOFT

Among revolutionary developments in petroleum history it is observed that a municipality in Wyoming's oil country wants to be called "Lilac Town."

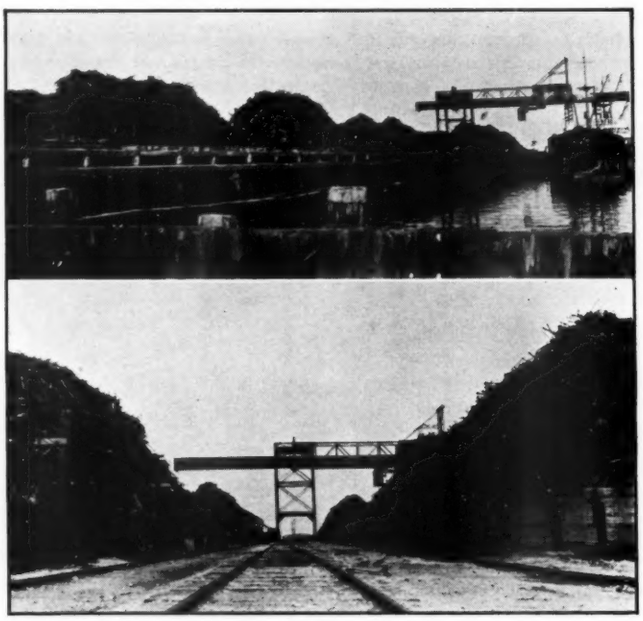
SUSTAINED CLAIMS

The Bureau of Mines found the industry had all the crude it claimed to have and practically all of it is merchantable.

WATCHFUL WAITING

Message of President Roosevelt to the Interstate Oil Compact Commission is another indication that conservation and proration effects of oil states are being watched with critical eye in high places.

BEYOND REPAIR



Oil fields and refineries are contributing worn-out and obsolete equipment to the hundreds of tons of scrap iron being shipped weekly from Gulf ports to Japan, Italy, England and other foreign countries

SETTLED ACTIVITY

East Texas has been considered a settled producing area for two years, but it is still leading the industry in drilling.

INCONGRUOUS

A newspaper says a motorist is one who complains of a 50-cent toll-bridge charge and says nothing about the $35 to $50 yearly toll he pays in the form of gasoline taxes.

NEXT MOVE

The next move of Esso (Standard of New Jersey) to enter the Middle West marketing territory will be awaited with interest. This largest of the Standard units is still believed to have national distribution of its products in the offing.

Bureau Reports Practically All Stored Crude Merchantable

By L. G. E. BIGNELL

SANTA FE, N. Mex.—The U. S. Bureau of Mines in a preliminary report today to the Interstate Oil Compact Commission covering a survey of crude oil in storage did not make a recommendation as to the economic limit in reducing these stocks. The bureau's survey showed that practically all the crude oil stocks reported from week to week are merchantable and refinable.

The question of how much more crude can be taken from storage, a matter in which the interstate commission is particularly interested at this time, was disposed of in the concluding sentence of the bureau's report, which said: "The desirable volume of oil in storage above ground is closely related to the rate at which oil can be produced, or additional well-capacity developed, to meet demands quickly as they arise."

This statement was interpreted to mean that the government bureau does not intend to change the position it has maintained over the past year in estimating crude oil demand from month to month. These estimates have not included recommendations as to reductions in crude inventories. The stocks have increased steadily since late in January.

Requested by Commission

The preliminary information on crude stocks is the result of a request early in 1936 by the interstate commission that a physical inventory be made by the Bureau of Mines. Funds appropriated by congress for the work became available July 1, 1936, and data were collected during the fiscal year ending June 30, 1937.

The commission's original request came at a time when the Bureau of Mines in making its monthly estimates of crude oil demand included recommendations covering withdrawals of crude from storage. The question of the oil industry's minimum working requirements in regard to crude stocks was raised by the commission. It was thought that part of the crude reported as stocks was not refinable and should not be considered in listing available inventories.

The bureau reported that in its survey of the physical properties of the crude in storage it made 60 determinations and observations of each of the 1,470 crude oil samples. The Bureau of Mines Hempel distillation method was used in making the tests. This covers the general physical properties of the crude, but does not indicate directly the gasoline obtainable by cracking in refinery operations.

Highlights of Bureau's Report

Practically all of the crude now in storage is merchantable.

No recommendation as to minimum working requirements.

Most "straightrun" gasolines from crude oil in storage would require addition of antiknock fluid or blending to make a satisfactory motor fuel.

A large part of crude was run to storage in flush period of field development when percentage of light fractions was relatively high. Due to this fact oil in storage in many fields has as large a percentage of these light fractions as crude currently produced.

Amount of loss in crude storage depends largely on characteristics of original oil, length of storage period and type of tankage.

Following are some of the findings and recommendations of the bureau in the report released here today:

"An important fact brought out by the special questionnaires and inventory is that all major purchasers of crude oil and pipe line companies include only net merchantable oil in their monthly stock reports to the Bureau of Mines. No water, bottom sediments, or other foreign materials are included in their figures. Therefore, although the quantities listed above represent totals of individual stocks which vary widely in characteristics because of differences in origin and losses in storage, the totals reported represent refinable oil.

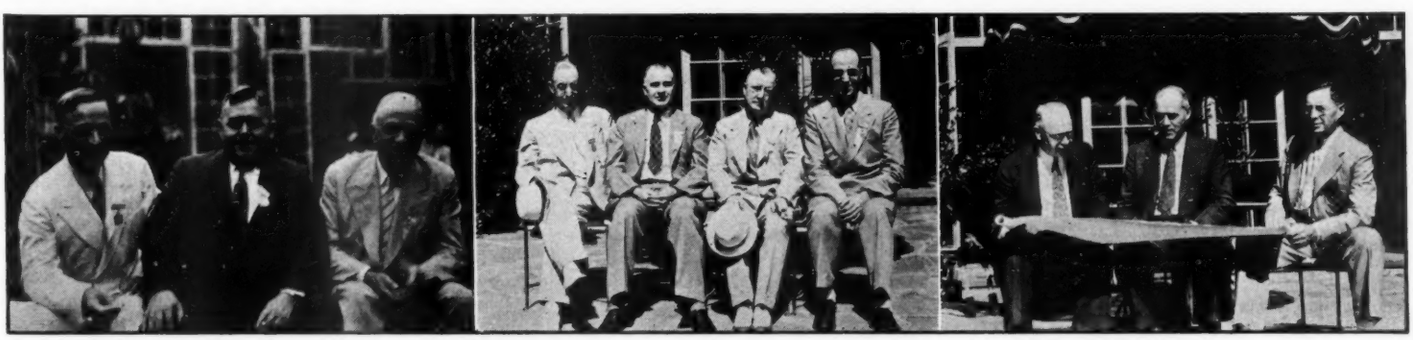
"Two other factors are worthy of mention in considering total available crude stocks. The stocks of refinable crude covered by the Bureau of Mines regular reports and by this survey do not include the large volume of California stocks classed as heavy crude and fuel oil, and amounting to about 64,000,000 bbls. as of June 30, 1936. These stocks include a considerable volume of unmixed heavy crude suitable for cracking and this item will be segregated in the final survey report.

"The status of the 26,000,000 bbls. of refinable crude stocks reported for Wyoming as of June 30, 1936, has been changed recently from a matter of local significance to an active factor in the competitive situation by the reopening of pipe line connections to refineries in the central states.

Distillate Content

"In considering the amounts and gravities of distillates recoverable below 392° F. from oil in storage on June 30, 1936, by age groups and states, account should be taken of two important factors: (1) The changes in characteristics of oil produced from a field as it is depleted, and (2) losses by evaporation from oil in storage. The first of these factors sometimes is as important as the second, as is indicated by the fact that some of the samples collected in this survey from oil that had been in storage for several years contained as large a fraction distilling below 392° F. as samples of oil now being produced from the same field.

"Usually the oil produced from a field becomes heavier as the field is depleted. Oil can be distilled by lowering its pressure as well as by raising its temperature; therefore, as the pressure in a producing horizon is decreased, a partial distillation takes place and the lighter fractions tend to move toward the well more rapidly than the heavier fractions. Thus, the oil produced from the well tends to be lighter than the oil remaining in the sand. This effect is increased by the production of natural gas with the oil, as the gas has a tendency to carry the lighter fractions toward the well. With the gradual reduction in pressure there is a gradual decrease in the percentage of lighter fractions contained in the produced oil. This tendency for



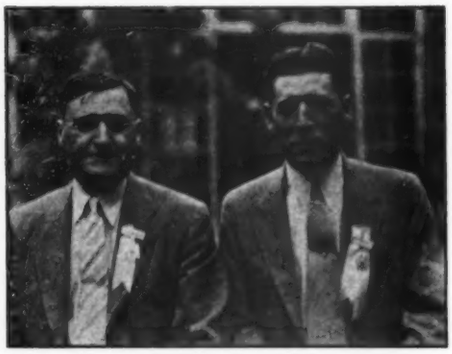
At the Santa Fe, N. Mex., meeting of the Interstate Oil Compact Commission. Left: Hugh M. Stalcup, Skelly Oil Co.; Gene Marlow and Fred Cook, Sinclair Prairie Oil Co. Center: Representatives from Kansas, Homer Hoch, E. E. Blincoe, E. R. Sloan and E. G. Dahlgren. Right: Bureau of Mines representatives looking over report on crude stocks they presented, R. A. Cattell, A. G. White and J. W. Horne

the oil from a field to increase in weight is more marked during the period of flush production than during the later life of the field.

"When oil is stored, especially in old-type tanks, it loses light fractions by evaporation. The loss is more pronounced from lighter than from heavier oils and is greater during the early part of the storage period than during the latter part. This loss is largely of the lighter ends of the distillate recoverable below 392° F., so the fraction that can be recovered by straightrun distillation for motor-fuel production is decreased in both quantity and

STOCKS AND DAYS' SUPPLY OF CRUDE PETROLEUM, JUNE 30, 1936, BY AGE, BY STATES OF ORIGIN

State of origin—	Stocks, June 30, 1936			Daily average demand, July, 1936	Days' supply, June 30, 1936		
	Old crude stored before 1936	Current crude stored in 1936	Total		Old crude stored before 1936	Current crude stored in 1936	Total
California	9,400,000	28,500,000	37,900,000	609,200	15.4	46.7	62.1
Texas	27,390,000	80,682,000	108,072,000	1,154,600	23.7	69.8	93.5
Oklahoma	44,363,000	42,700,000	87,063,000	651,100	68.1	65.6	133.7
Louisiana	1,483,000	11,357,000	12,840,000	232,500	6.4	48.8	55.2
New Mexico	408,000	5,810,000	6,218,000	65,000	6.3	89.4	95.7
Kansas	629,000	5,243,000	5,872,000	162,300	3.9	32.3	36.2
Arkansas	1,374,000	3,706,000	5,080,000	23,800	57.7	155.7	213.4
Other states	32,533,000	12,868,000	45,401,000	221,400	146.9	58.2	205.1
Foreign	.....	2,600,000	2,600,000	79,900	.....	.....	32.5
Total	117,580,000	193,466,000	311,046,000	3,199,800	36.7	60.5	97.2



Frank Worden, State Land Commission of New Mexico; Ben Lechini, chief of Tax Commission of New Mexico

quality. The loss by evaporation has no marked effect on the quantity and quality of gasoline that can be recovered by cracking the residue from straightrun distillation.

"Monthly statistics of crude oil stocks by states of origin have been available only since December 31, 1934, but subsequently have been compiled regularly by the Bureau of Mines. A special objective of the present survey has been to secure more spe-

G. W. Holland, director of the Petroleum Conservation Division, Department of Interior

cific information, in terms of days supply, as to the relation of current and old stocks of state origin to the market demand for crude oil.

"Many stored oils sampled in this survey show a similar but less pronounced loss in lighter fractions. The amount of loss depends upon the characteristics of the original oil, the length of the storage period, the type of tank in which the oil was stored, and various pertaining circumstances.

"This preliminary report presents a summary in brief form for consideration of the outstanding results. The detailed data obtained are being reviewed and analyzed with a view to the publication of a comprehensive final report. The original survey covered a specific period and the results will make possible an evaluation of the relations and problems involved.

"It is evident that, if the results of the survey are to be converted into practical data related to future production programs, changes in stocks must be identified by the collection of current statistics for the stock groups indicated, and further technical studies must be made of the qualities and refinery yields of various types of crude petroleum and of the availability of underground reserves. The desirable volume of oil in storage above ground is closely related to the rate at which oil can be produced, or additional well-capacity developed, to meet demands quickly as they arise."

Country's Crude Stocks Are Not Excessive

SANTE FE, N. Mex., July 13.—Crude oil stocks in this country are not excessive, Col. E. O. Thompson, member of the Texas Railroad Commission, said here today. Colonel Thompson, chairman of the Interstate Oil Compact Commission, which is holding a regular meeting here, expressed this opinion following presentation of a report yesterday by the Bureau of Mines showing the quantity and quality of crude oil in above ground storage.

Colonel Thompson referred to that part of the report which showed that stocks of refinable crude oil on March 31, 1937, totaled 297,496,000 bbls. This is equivalent to about 90 days' supply based on the present rate of production to supply domestic and export markets. Dr. R. A. Cattell and A. G. White, of the Bureau of Mines, presented the report.

Few Have Surplus Stocks

It was pointed out about 60 of the larger companies control or have the major portion of the oil above ground and few of these companies have any real surplus stock on hand. Colonel Thompson further pointed out in his interview this morning that this report of the bureau on crude oil stocks is the first of its kind ever issued by any organization and is the principal accomplishment up to this time of the commission.

The meeting yesterday indicated quite clearly many additional facts are desired from the bureau and many questions asked indicate it is the object of the commission to add to the information already released so the public may know for the first time just how much crude oil expressed in terms of days' supply of gasoline is on hand.

Mr. White stated there was about 88 days' supply of crude but pointed out that over 50,000,000 bbls. is in pipe lines, gathering systems or work tanks along pipe lines and therefore would not be available at any time unless these tanks and lines were finally cleared of all crude oil. This materially reduces oil available to refineries.

The problem now facing the industry is to find means of increasing the capacity of wells and fields to produce additional oil and it was suggested the next step should be a survey of all fields and wells to determine accurately real potentials and also critical rate of production for wells and fields. If more oil can be produced to meet an increasing demand without reducing the ultimate total recovery it may then be possible to build up some additional working stocks at refineries but the commission is not prepared at this time to recommend definitely the necessary field survey to establish true potentials of all fields.

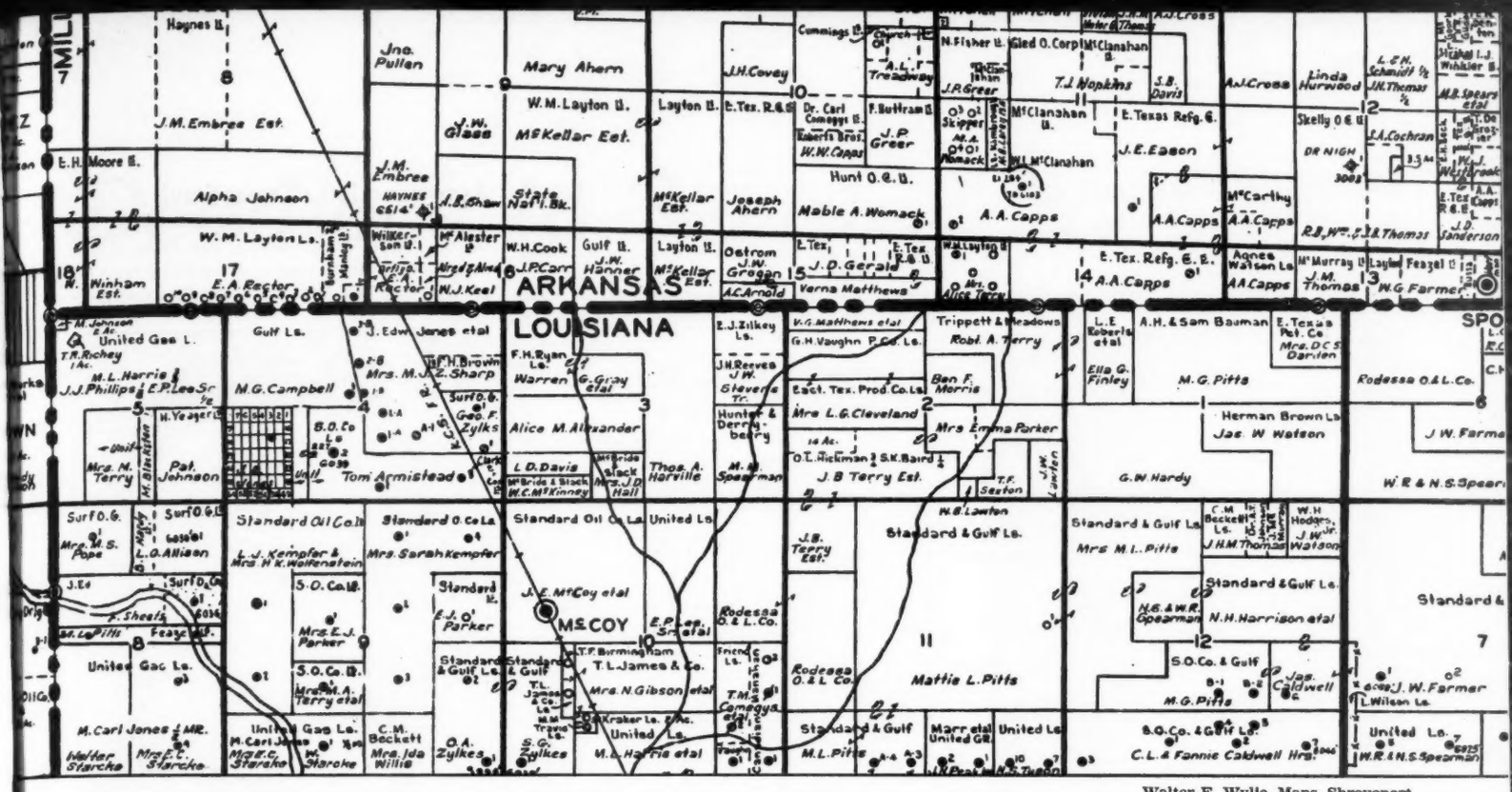
Colonel Thompson presided at the open meeting of the commission yesterday. He read a message from President Roosevelt which said: "I am happy to send my personal greetings to the governors and representatives of the oil compact producing states meeting with the Interstate Oil Compact Commission and to wish you success in your endeavor. I am hopeful that your discussions will point the way to broader understanding of the need for the application of sound engineering principles in the conservation of our oil and gas resources."

Session Devoted to Report

Most of the opening session was devoted to the Bureau of Mines report. Members of the commission were asked to comment on the data presented in the report at today's session.

All the compacting oil states with the exception of Illinois had representatives at the conference with observers from four of the noncompacting states. Governors Tingley, of New Mexico and Marland, of Oklahoma, were present.

It was announced that all the states which signed the original compact agreement have renewed the agreement through acts of their legislatures and governors. The final step in the renewal of the compact is the approval of congress and the president. It is expected that congress will take the necessary action before adjournment. The present compact expires in September, 1937.



Walter E. Wylie, Maps, Shreveport

North Louisiana and Arkansas extension of Rodessa field

Flush Fields in Arkansas Keep Board of Conservation Busy

By MITCHELL TUCKER

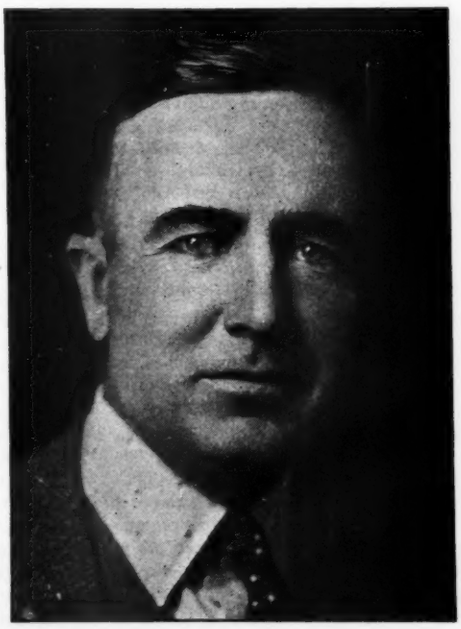
SHREVEPORT, La., July 12.—With the return of flush production to Arkansas in the Rodessa extension and the promising Schuler field of Union County, the Arkansas Board of Conservation is busy with public hearings, appeals for close or wide spacing, and for rigid proration or wide-open allowables.

The first public hearing on the Rodessa, Arkansas, area, held in Texarkana, Ark., this week, was attended by about 75 operators, attorneys, and other interested persons. Chairman O. C. Bailey, of the Arkansas Board of Conservation, was the presiding officer. He and C. E. Harris, chief conservation agent and member of the board, both residents of El Dorado, were the only board members present. It was indicated that Arkansas operators would cooperate with those of Texas and Louisiana in a program of orderly development.

Jack Steel, chairman of the Federal Tender Board at Kilgore, Tex., attended as an observer for the secretary of the interior, and he spoke briefly on experiences in other fields.

W. H. Bell, chairman of the engineering subcommittee of the Rodessa, La., operators' committee, and W. F. Chisholm, chief conservation agent of the Louisiana Department of Conservation, were observers from this state. Representatives of operators on the Texas side of the field were present, but no official observer from the Texas Railroad Commission attended.

Recommendations and opinions were accepted from those present on spacing, casing programs, and manners of allocation. As in other hearings of this sort, these ranged from one extreme to another. In conclusion, Chairman Bailey stated that all evidence presented would be taken under advisement, and orders issued which would result in the development of the south Miller County, Arkansas, extension of Rodessa in a sane and orderly manner, and in a way that would result in the greatest ultimate production to the state.



O. C. BAILEY

Following a recent conference with Governor Carl E. Bailey of Arkansas, Chairman Bailey said: "At present there is not sufficient production in Arkansas to make proration necessary, but if future drilling develops these new fields to their indicated major proportions, the state will prorate production so that Arkansas will not upset the national applecart of the oil industry."

Much has been said on the desirability of uniform oil and gas laws among states, and the tri-state Rodessa field provides an excellent example of the benefits which would result from such uniformity. Production from this common reservoir in three states is allocated in Louisiana and Texas upon a 50 per cent acreage and 50 per cent bottom-hole pressure basis, permitting a maximum acreage allowable of one well to 40 acres.

The accompanying map shows the location of W. L. McClanahan and others No. 1 Capps, section 11-20-28, Miller County, Arkansas, which flowed at the rate of 120 bbls. hourly on initial test through 1½-inch tubing after acidizing. It extends the Mitchell and Gloyd sand portion of the Rodessa field into Arkansas. The operators have voluntarily pinched the well in to 500 bbls. daily.

Production is from the Mitchell and basal Gloyd portion of the Glen Rose. On the Rodessa structure proper the principal oil saturation occurs in the Dees-Young section underlying the Gloyd, while the upper oolitic, or coquina, horizon carries only gas.

Pennsylvania Grade Crude Oil Association Elects Officers

OIL CITY, Pa., July 12.—W. Floyd Clinger, president of the Clinger Oil & Gas Co., of Tidioute, Pa., was elected president of the Pennsylvania

W. FLOYD CLINGER

Grade Crude Oil Association yesterday at the first meeting of the board of directors elected at the recent annual meeting. He succeeds T. P. Thompson, Jr., of Bradford.

Mr. Clinger is also president of the Warren-Forest Counties Oil Producers Association and is one of the foremost producers in the Pennsylvania Grade crude oil region. His company pioneered secondary recovery operations in the middle district and is now experimenting with steam as a medium for heating the oil-bearing sands.

Other new association officers elected are: Parker L. Melvin, president of the Towne-Melvin Oil Co., Bradford, Pa., vice president, and John A. Beck, president of the Pennsylvania Refining Co., Butler, Pa., recording secretary. Officers reelected are: Fayette B. Dow, Washington, D. C., vice president and general counsel; Samuel Messer, vice president, Quaker State Oil Refining Corp., Oil City, Pa., treasurer; Walter R. Reitz, secretary, Quaker State Oil Refining Corp., Oil City, assistant treasurer; J. E. Moorhead, Oil City, executive secretary, and S. A. Hartwell, Jr., Oil City, assistant secretary.

Directors who attended the meeting were: R. G. Sonneborn, L. Sonneborn Sons, Inc., New York; D. E. Hoffman, Tide Water Associated Oil Co., New York; H. R. Lewis, Conewango Refining Co., Warren, Pa.; P. H. Zook, Sloan & Zook Refining Co., Warren, Pa.; C. L. Suhr, Pennzoil Co., Oil City; H. H. Greene, Kendall Refining Co., Bradford, Pa.; W. J. Brundred, Brundred Oil Corp., Oil City; H. W. Schmidt, United Refining Co., Warren, Pa.; W. F. Clinger, P. L. Melvin, S. Messer, W. R. Reitz and Fayette B. Dow.

Superior Purchases Leases

The Superior Oil Corp., Tulsa, according to its president, John L. Essley, has purchased the Gillespie one-half interest in the Placedo properties in Southwest Texas, consisting of 14 flowing oil wells, 1 pumping oil well, 1 closed-in gas well and 1,560 acres of leases. Negotiations are under way for the purchase of additional Texas properties under the company's current expansion program, according to Mr. Essley.

The Superior has purchased also a part of the holdings of Mortimer & Springer in the Lopez field of Webb and Duval counties. The transfer involves 480 acres and 28 wells on the "B" lease, Peal acreage, in sections 794 and 796, Duval County.

World Oil Conditions Best In Years Says Thompson

AUSTIN, Tex.—World oil conditions are the best in years, declared Col. E. O. Thompson, chairman of the Interstate Oil Compact Commission, upon his return from the World Petroleum Congress in Paris.

"I think the United States will furnish more of the European supply than in the past because we have a better grade of crude and more dependable sources of supply," said Colonel Thompson, who was one of the American delegates to the congress. "At Marseilles I saw a Texas tanker come in bringing Texas crude to a $14,000,000 refinery, shipped from Corpus Christi. European gasoline consumption for 1937 will show an 11 per cent increase over 1936, officials estimate. This is about the same increase that is being experienced in the United States. They are all preparing for war but none expect to be ready for war under two years."

Many of the delegates to the world congress were amazed to learn that Texas now is furnishing one-fourth of all the crude oil in the world, Colonel Thompson said.

Although general conditions were excellent, Colonel Thompson said many European refineries were not up to the best standards and that branch of the industry would witness improvements.

Tennessee Sues Pan American

NASHVILLE, Tenn.—Suit to collect $1,016,000 of gasoline tax declared due for the period April, 1933, to November, 1936, has been filed here by the state of Tennessee against Pan American Petroleum Corp. The company is accused of failure to comply with all provisions of the statute relative to export gasoline. It is alleged indiscriminate shipments of gasoline were stored in tanks labeled for export and gasoline so stored was liable for state tax.

THE MARKETS*

CRUDE OIL: *New schedules for Mirando and Refugio crudes in Southwest and Gulf Coast Texas brought minor price advances in low-gravity grades. Wilmington crude in California advanced 5 cents per barrel. Price increases reflect in part strong position of low-gravity crudes. Other crude markets unchanged.*

REFINERY: *Gasoline prices advanced at several points along Atlantic seaboard. Natural gasoline prices higher in Mid-Continent. Reductions in Pennsylvania bright stocks and neutrals.*

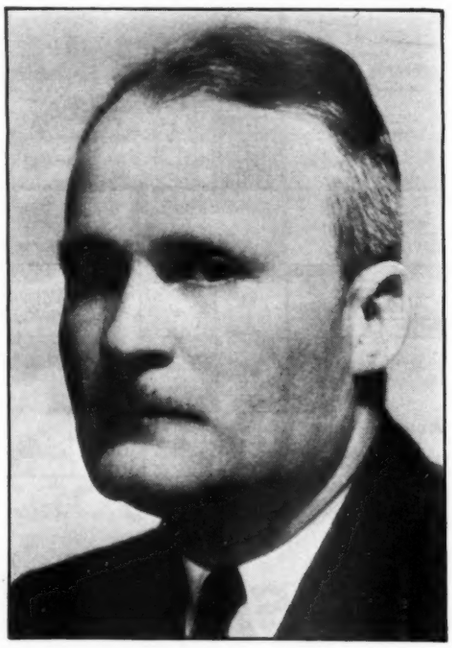
TANK-WAGON AND SERVICE STATION: *Standard of New Jersey advanced gasoline dealer and tank-wagon prices on gasoline effective July 13. Increases include territories of subsidiary companies, Standard Oil Co. of Louisiana and Colonial Beacon Oil Co. No important changes in other territories.*

FINANCIAL: *Common oil stocks show further recovery with a few passing previous 1937 highs. Average of 30 representative stocks for week ending July 10: High, 42.20; low, 40,83; close, 41.59. Week ending July 3: High, 40.75; low, 38.27; close, 40.58.*

**Detailed information in Market Section.*

Armstrong Joins Texas Steel

A. J. Armstrong has resigned as secretary of the Association of Producers of Petroleum of Mexico to become vice president of the Texas Steel Co., Fort Worth, Tex. His duties will be those of executive officer in charge of the oil-field activities.



A. J. ARMSTRONG

Mr. Armstrong, whose resignation is effective August 1, has a wide acquaintance with oil operators in the Southwest, due to his association with the business over a period of 19 years. He was operating in the old Desdemona field when it first became active, and he left there to join the Gulf organization at Tampico. He was later district superintendent for the Gulf on the Isthmus of Tehuantepec. Mr. Armstrong left the Gulf organization in 1922 to become secretary of the Association of Producers of Petroleum of Mexico.

Fights Removal to Madison

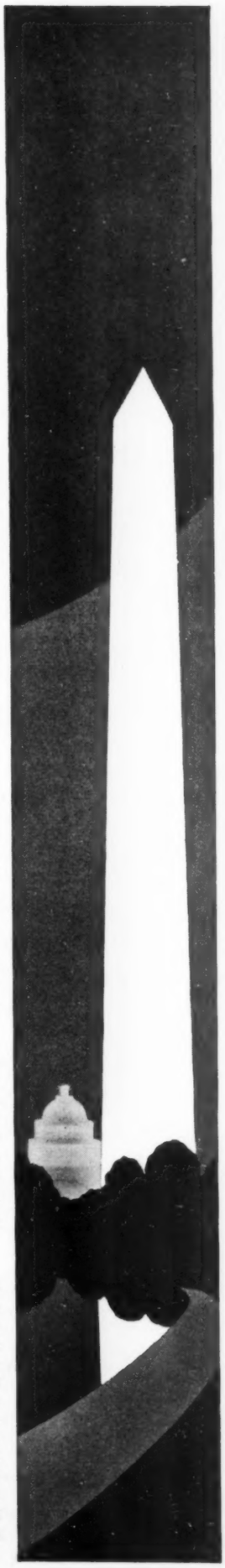
PITTSBURGH, Pa. — William V. Hartmann, vice president of the Gulf Oil Production Corp., has opened a legal battle to prevent removal of himself and three other Gulf officials to Madison, Wis., for trial on charges of conspiring to fix gasoline prices. Former Senator David A. Reed, counsel for Mr. Hartmann, argued before a United States commissioner that the federal court in Wisconsin did not have jurisdiction. The Wisconsin case involves 24 major oil companies, some of whose officers were charged with conspiring from March 1, 1935, to December, 1936, to raise and fix the price of gasoline in 10 Middle West states.

Gasoline Cheaper Than Hay

HUTCHINSON, Kans. — Gasoline is cheaper than hay. Charles Hornbaker, chairman of the Reno County board of commissioners, has decided. In the midst of levy making for another year Mr. Hornbaker was surveying old records for comparisons. He found, for instance, that the county spent $40,716 in the fiscal year 1931-32 for patrolling 247 miles of county highway. Then all maintainers were horse-drawn. County Engineer Ernest Higgins has asked $20,000 for maintaining 310 miles of highway in the coming year. All equipment is motorized now and the cost is less than half.

Deadlock in Senate May Hold Up Legislation

By HENRY D. RALPH



WASHINGTON, D. C., July 12. — Prospects for the enactment of oil or other legislation during the next month or two virtually disappeared this week when the senate entered what promises to be the greatest deadlock since the League of Nations fight in the Wilson administration.

Senate leaders introduced a revised form of the president's plan to add new blood to the Supreme Court and immediately made it the unfinished business before the senate, apparently with the assurance that they have sufficient votes to pass it, although the original plan was doomed to defeat; but opponents threatened to filibuster for weeks to prevent a vote on the ground that the substitute measure is not a compromise at all, but retains all the objectionable features of the president's original plan.

Serious consequences will develop if this deadlock holds. The entire interior department will find itself without funds on July 15, and all activities of this department pertaining to the oil industry as well as its other functions will be hampered, although most employes probably would continue to work without pay in the expectation of being reimbursed later.

Wage and Hour Regulation

A drastically revised wage and hour control bill has been reported by Senator Black from the senate committee on labor, and the house labor committee has begun consideration of the measure, which is also expected to result in somewhat similar curtailment of the scope of the original Black-Connery bill submitted by the administration. Vast powers of regulation of working conditions in industry proposed to be given to the Labor Standards Board have been eliminated by the Black committee, and the amended bill is designed only to stop oppressively low wages and long hours. The bill still would prohibit interstate shipment or sale of goods produced by employes whose wages or hours violated standards set by the board and therefore cannot be held constitutional unless the Supreme Court reverses its old child labor decision. The Labor Standards Board is directed to establish minimum wages and maximum hours for various industries, taking into consideration such factors as cost of living, value of services rendered, comparable conditions in other industries, efficiency and well being of employes, and number of persons available for employment. In no case, however, could the board fix a maximum work week shorter than 40 hours nor a minimum wage higher than 40 cents an hour. No orders could be issued until after investigations and public hearings regarding the industries covered.

Maximum Work Week

The maximum work week could be exceeded on payment of time and one-half for overtime unless otherwise specifically ordered by the board. The board could vary its wage and hour requirements for different classes of employers, employes, or employments, according to geographical regions, size of community, size of plant, and other pertinent circumstances, and could grant exemptions for learners, handicapped workers, peak production periods, and other special cases. As a rule persons under 16 could not be employed at all and those under 18 could not be employed in hazardous occupations, but exceptions could be made where the work would not interfere with schooling and health. The bill would not apply to persons employed in an executive, administrative, professional, or local retailing capacity. The definition of local retailing would be up to the board, and the bill gives no indication whether or not filling stations owned by a major oil company, for example, would be covered. Otherwise the bill would apply only to the production or handling of goods going into interstate commerce, except that the board could apply its orders to intrastate activities found to be competing with interstate business.

Geological Survey

The U. S. Geological Survey has made a number of changes in the boundaries of its districts, which are described as being of minor importance other than to improve administration. The Mid-Continent district now includes all of Oklahoma except the Osage Indian Reservation and the states of Kansas, Arkansas, Louisiana, Mississippi, and Alabama. Headquarters are in Tulsa, in charge of John M. Alden. The northwestern territory now embraces North and South Dakota, Montana, Wyoming, Washington, Oregon, Missouri, and parts of Arizona, Colorado, and Utah. Headquarters are at Casper, Wyo., in charge of H. J. Duncan. The southwestern territory includes all of New Mexico, most of Arizona, southwestern Colorado, and southwestern Utah. Headquarters are in Roswell, N. Mex., in charge of E. A. Hanson. California district embraces California and Alaska, with headquarters at Taft, Calif., in charge of Robert C. Patterson.

Marketing Divorcement

The old subject of breaking up integrated oil companies is revived in a bill introduced by Representative Fred Biermann, of Iowa, to be known as the petroleum marketing divorcement act of 1937. The principal provision makes it unlawful to engage in the marketing of petroleum products and at the same time be engaged in one or more of the other branches of the petroleum industry. Marketing is defined as the distribution of petroleum products in the United States either at wholesale or retail. The bill would be enforced by the Department of Justice through the federal courts and violation would be punishable by a fine of not to exceed $10,000 for each offense.

Federal Trade Commission

The house interstate commerce committee has favorably reported a bill to expand the powers of the Federal Trade Commission by giving it authority to prevent unfair or deceptive acts or practices in interstate commerce. At present the commission has jurisdiction over unfair methods of competition only, and enactment of this legislation would change its function from that of an umpire of competitive trade disputes to the protector of consumers and the general public against all sorts of trade practices considered to be unfair whether competitive or not.

Petroleum Freight Rates

The Interstate Commerce Commission has ordered lower freight rates on petroleum and petroleum products, carloads, from points in Arkansas, Kansas, Louisiana, Missouri, New Mexico, Oklahoma, and Texas to certain destinations in east central Wisconsin, following complaint of shippers at the Wisconsin destinations that the higher rates were preferential of competitors in St. Paul and Red Wing, Minn., and Milwaukee, Beaver Dam, Horicon, and other Wisconsin points. The commission found that the higher rates were prejudicial to the complainants to the extent that they exceed the corresponding rates in effect to the points found to be preferred by more than 2.5 cents per 100 pounds for each 50 miles or fraction thereof by which the distances to the prejudiced points exceed those to the preferred points over the shortest rail lines, and ordered adjustments accordingly.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Keeping Up With the Joneses

The buying habits of the Joneses are again the subject of many surveys and investigations.

Other industries are literally spending millions trying to find out what clothing, food, cars, amusements and the hundred and one other commodities and services this ever changing family wants.

The oil business might profitably pay more attention to the Joneses for their new petroleum requirements are already important—increasingly so tomorrow.

Everyone knows the Joneses have more leisure now and they are driving their cars oftener and farther. This accounts in large measure for the phenomenal increases in motor fuel demand over the past three years.

The Jones we have particularly in mind was one of the 200,000 who installed oil burners in their homes last year. This meant that he consumed four times more petroleum in his basement than he did with his car on the highways and streets. It will take nearly 90,000,000 barrels of burner distillates to fuel more than 1,500,000 of these burners in all types of buildings next winter.

This is not all. Jones has new oil-type space heaters which he uses in his home in the fall and spring months when the main unit is not operating. There are in fact a rapidly increasing number of home owners who obtain satisfactory heating the entire year with these smaller stoves. They burn kerosene and distillate. Mrs. Jones is an all-year-round buyer of liquefied gas for her kitchen range.

Convenience and cleanliness are the primary motivation back of the use of oil within the home. All factors considered there is usually the third consideration of economy.

All in all, Jones this year will consume about 3,300 gallons of petroleum products within and outside his home and pay at least $350. He considers the money well spent.

Many of his neighbors have checked results and are preparing to duplicate his installations.

We could follow Jones down to his work in a diesel-powered bus. He has offices in a large building which obtains all of its electric power and part of its heat from a large diesel power plant. This is to be expanded to take on an air-conditioning program.

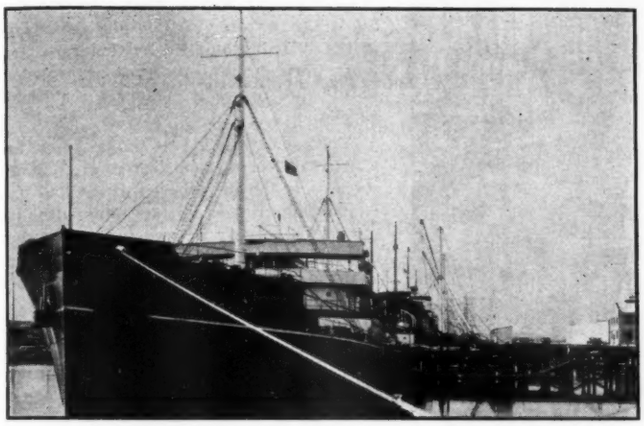
These diesel engines use about the same refinery products as the oil burners. The difference is that the requirements of individual units are measured in barrels rather than gallons. Diesel sales are running 60 per cent ahead of last year.

The foregoing explains why the demand for distillates is expanding even more rapidly than gasoline. If it can be kept free from special taxes and high retail sales, costs which have plagued gasoline in recent years, there is no reason why this growing market for a large fraction of a barrel of crude should not add to the profits of producers and refiners. The net tankcar prices for gasoline and distillates at many refineries and distributing terminals are not far apart at this time.

The skeptic will point out that all families are not Joneses. It is fortunate this is now true as otherwise the domestic demand for oil would increase threefold over night.

It is well, nevertheless, to bear in mind that the efforts to keep up with the Joneses explain most of the new markets and the industrial progress of the last half century.

California Has Good Year But Reduced Activity Seen



Tankers discharging crude oil and gasoline at a terminal in the harbor at Los Angeles, Calif.

By L. P. STOCKMAN

Although California producers, refiners and marketers will show excellent earnings during 1937 due to increased consumption and a relatively stable market they will be obliged to curtail operations next winter. Crude oil production has shown a consistent increase during the past 60 days and will go higher.

The Wilmington field of Los Angeles Basin, while not dominating the production situation, is nevertheless a disturbing factor due to unrestricted production. As the situation stands, it appears probable that the California oil industry can go through the summer period in good shape even with the existing excess production in the Wilmington field due to the relatively low yield of motor gasoline from this oil. Considerable difficulty has been experienced by refiners in disposing of residuum resulting from the refining of Wilmington crude oil and this may ultimately prove to be a disturbing factor. The Wilmington crude contains about 1.50 per cent sulfur. A concerted attempt has been made to formulate a constructive curtailment program for Wilmington and thus provide adequate pipe line outlets and the posting of a crude oil price schedule.

Export Shipments

Shipments of crude and refined oil to Pacific and Atlantic foreign ports and tanker shipments of refined oil to the Atlantic seaboard for domestic consumption are important factors in the consumption of California petroleum and consequently exert a pronounced effect on crude oil production. Japan and the Far East are the best customers of the California oil industry, with substantial shipments of refined oil also made to South America, England and western Europe. Union Oil Co. has already made one shipment of 75,000 bbls. of Santa Maria Valley crude oil to Belgium and holds a contract for two additional cargoes. This export movement to Belgium may later become a permanent fixture if this crude oil comes up to expectations and prices remain favorable. Future fixtures in the tanker market may also be an important factor because a substantial increase in charter rates would preclude or severely restrict future shipments.

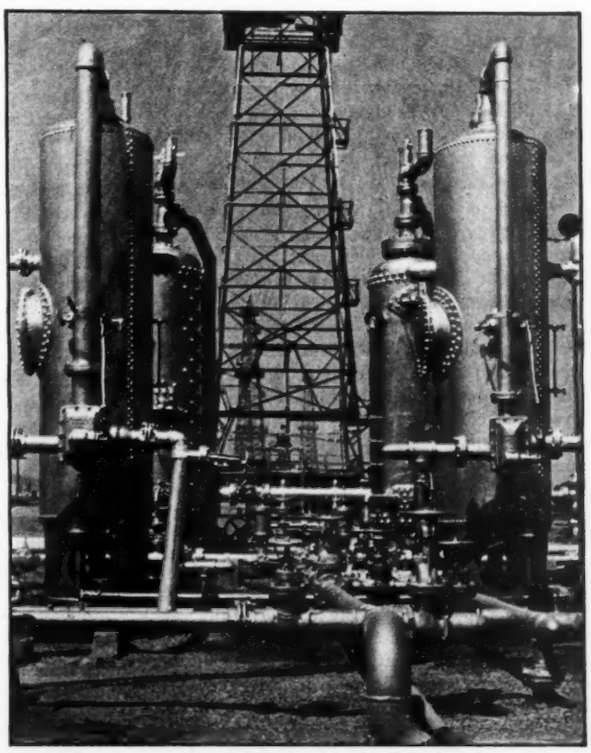
Approximately 8,300,000 bbls. of crude oil, 8,000,000 bbls. of fuel oil, 4,900,000 bbls. of diesel and gas oil, 6,000,000 bbls. of gasoline, 250,000 bbls. of lubricating oil and 500,000 bbls. of unfinished oil have been moved to Japan during the first six months of 1937 and it is believed that this quantity will be more than doubled by the end of the year. Export shipments of each product during the first half of 1937 were substantially higher than during the same period last year. Some California marketers use the Pacific foreign market as a leverage to maintain an approximate equilibrium between supply and demand for California production and consequently shipments sometimes show an abnormal fluctuation.

Tide Water Associated Oil Co. through its affiliation with Mitsubishi Shoji Kaisha and Mitsubishi Oil Co. maintains a fairly steady tanker movement in the Pacific foreign market. This is also true of General Petroleum Corp., which deals through Mitsui & Co. Shell's eastern marketers are principally the Asiatic Petroleum Co., a member of the Shell group, and the Rising Sun Petroleum Co. Standard Oil Co. and some other marketers sell or distribute through Asano Bussan. In these shipments the consignee may either be Ogura Oil Co., the Imperial Japanese navy or some other Japanese refiner and marketer.

The substantial shipments of crude and refined oil to Japan are especially interesting because California marketers at the beginning of the current year were reluctant to make large commitments. A subsequent appraisal indicated increased production of crude oil in California and opened the way for export shipments. For several years the Japanese market almost exclusively demanded Kettleman Hills crude but, when the California demand for Kettleman Hills crude increased, the Japanese market absorbed some crude oil produced in the Coalinga, Mount Poso and Brea-Olina fields.

Due primarily to chronic overproduction in the Wilmington field crude oil output in California for the past several months has been consistently in excess of the allowable quota fixed by the central committee of California oil producers, official curtailment committee. Crude oil production in California during the first five months of the current year totaled 92,156,409 bbls., an average of 610,370 bbls. per day. This is far in excess of production during the same time last year and current production is the highest recorded since December, 1935.

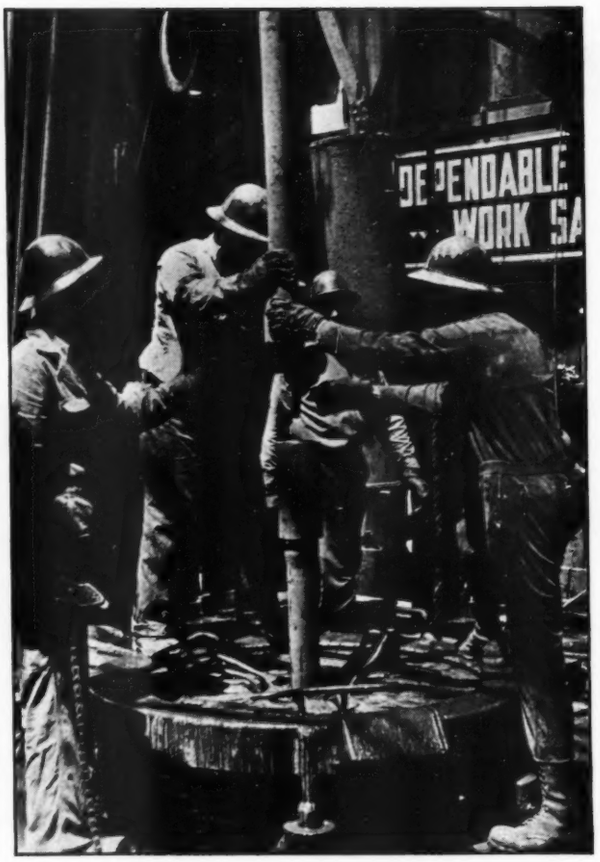
A few operators at Wilmington are curtailing production activities but for the most part the field is wide open and would go higher if operators could sell all they could produce. Fortunately, the local market can only absorb a portion of the field's potential, which at present is 81,250 bbls. and should reach 100,000 bbls. per day before the close of August unless an acute shortage of tubular goods develops. Union Pacific Railroad Co. heads the production list in the Wilmington field with a current production of 10,980 bbls. per day from 22 wells, followed by Royalty Service Corp. with a daily production of 9,950 bbls. from 30 wells. Other large producers in this field include General Petroleum Corp. with a production of 7,025 bbls.



Typical hook-up in Belridge field where high pressures are encountered

per day from 19 wells; George F. Getty, Inc., 3,050 bbls. per day from nine wells and Bankline Oil Co., 2,560 bbls. per day from 11 wells. General Petroleum Corp. and Union Pacific Railroad Co. are both curtailing and could double present production.

During the month of May, the Wilmington field produced 39,741 bbls. of crude oil per day against a daily allowable of 13,460 bbls. and the state produced 656,951 bbls. per day as compared with an allowable of 602,330 bbls. daily. The Wilmington excess production was 26,281 bbls. per day and the state excess was 54,621 bbls. per day. In other words, almost half of the total excess of the state during the month of May was due to unrestricted production at Wilmington. That crude oil production in California during the month of May was in excess of the demand is evidenced by the fact that total fluid stocks of all commodities in Pacific Coast territory showed an increase for the first time this year. During the month of May, total stocks increased 407,352 bbls., bringing the total to 125,303,249 bbls. at the end of the month. Heavy crude and fuel oil increased 312,129 bbls.; refining crude, 109,044 bbls.; natural gasoline, 182,388 bbls.; naphtha distillates, 92,991 bbls. and remaining stocks, 31,712 bbls. Gas oil and diesel was down 238,763 bbls. and gasoline stocks declined 82,149 bbls. This indicates that California marketers should be able to go through the next several months in good shape provided the central committee of California oil producers does not step up production too much. In view of conditions prevailing at Wilmington, it is not likely that the committee will increase the allowable quota for the month of July more than a few thousand barrels at most.



Deep sands are increasingly important in California production. View shows crew at work at 10,435-foot producer in Dominquez field

With the exception of Kettleman North dome, McKittrick, Midway-Sunset, Santa Maria and Wilmington, the production of most fields throughout the state for the month of May compared very favorably with the average daily production recorded during April. These fields showed gains varying from a few thousand barrels per day to the increase of 18,068 bbls. per day chalked up by Wilmington. In May, two new wells with an aggregate initial daily production of 4,974 bbls. were completed in the North Belridge field, but field production only increased 275 bbls. per day, indicating a splendid degree of curtailment.

Production of the Greeley and Ten Section fields, discovered by Standard Oil Co. and Shell Oil Co. respectively, is being retarded. During the past month one new well was completed in the Greeley field flowing 3,330 bbls. per day but field production only averaged 861 bbls. per day. At Ten Section, Shell Oil Co. completed a new well flowing 2,788 bbls. per day but field production was only up 99 bbls. per day. Five excellent wells have been completed by Shell Oil Co. in the Ten Section field since its discovery and two large producers have been completed by Standard Oil Co. in the Greeley field.

Development Work

Drilling operations in proved fields and exploration work in wildcat areas during the first six months of 1937 is far in excess of similar work undertaken during the same period last year. If drilling operations continue unabated for another six months the current year will show the largest amount of work undertaken since 1930 when there were an average of 434 wells drilling throughout the year. The present rate of drilling is due to aggressive development in the Wilmington, Midway-Sunset and Santa Maria Valley fields and also reflects consistent drilling in the Kettleman North dome, Ten Section, Greeley and Ventura Avenue fields.

There are a number of wildcats drilling in several areas. Continental Oil Co. seems almost definitely assured of opening up a new field in the Wasco area of Kern County although it may take two additional wells to locate the productive area. The company's initial wildcat actually produced a small quantity but failed to prove commercially productive due to mechanical trouble which left several thousand feet of drill pipe in the bottom of the hole. The company was unable to remove the fish and had to work through the drill pipe by fabricating tools and finally succeeded in cleaning out the bottom of the hole below the bottom of the drill pipe. This wildcat which was located as the result of geophysics actually produced a small amount of crude oil from a depth of 9,591 feet.

Rotary drilling equipment is being rigged up on No. 2 Kern County Land about 500 feet north of No. 1 Kern County Land and it is expected to spud in within the next few days. The Tejon district located in the extreme southern part of San Joaquin Basin has shown good possibilities of production but this area may require additional drilling. The Reserve Oil & Gas Co.'s latest wildcat in this area has been delayed by a water problem and the hole has been recemented for the second time at 4,541 feet with bottom of the hole at 4,570 feet.

Reserves

In order to maintain present reserves prospectors are obliged to discover at least 200,000,000 bbls. of new production yearly and within a few years this amount will have to be substantially increased due to rapidly increasing consumption. California has been drawing on reserves in varying degrees for the past several years and while important discoveries by Shell, Standard and Union have been made at Ten Section, Greeley and Santa Maria Valley in addition to discovery of the Wilmington field by General Petroleum Corp. present reserves are substantially below the visible reserves of a decade or so ago.

For some time it was thought that the Kettleman North Dome field more than offset the decline in reserves which had previously taken place but developments during the past year or two indicate rather conclusively that this field has been greatly overrated and cannot possibly produce original expectations. Up to the close of May, the Kettleman North Dome field had produced a total of 159,143,381 bbls. of crude oil and considering the depleted condition of the Huffman and Felix sections of the field, the generally accepted probable recovery of 1,000,000,000 bbls. of crude oil appears rather high. This estimate may be reached, however, as it appears probable that Kettleman North Dome Association has found sufficient oil sand to prove the underlying Eocene productive. The well in question is No. 4-18-J in section 18-21-17, which at last reports was rotating ahead in a hard sandstone and oil sand at 10,739 feet. This well is located in the extreme western end of the structure and its completion in rocks of Eocene age would add greatly to the future reserves of the field.

Deep drilling may become an important factor in future production of existing fields although results to date have not been any too encouraging. In the Santa Fe Springs field, Union Oil Co. No. 100 Bell has been hung up for the past two or three months because of mechanical trouble and it may require the drilling of another deep test to determine just what has been found in the present well. No data are available regarding subsurface conditions encountered in No. 100 Bell but field reports indicate that the company may have found something in the bottom of the hole. Bandini Petroleum Co. officials have been considering the advisability of drilling a deep test in this field but no definite decision has yet been reached. In the Dominguez field of Los Angeles Basin eight productive horizons have been found productive and one or more productive zones are expected to be encountered in the Miocene before the bottom is reached.

Wasn't Stealing, Says Judge

OKLAHOMA CITY, Okla. — Common Pleas Judge Charles W. Conner threw light on what constitutes petty larceny when C. T. Herring appeared before him, accused of stealing 5 gallons of drip gasoline which came from a natural gas line near his home.

"Did you tap the line?" asked the judge.

"No, I didn't," said Mr. Herring. "There was a saddle on the line and it had been leaking gasoline for months. I needed some for my car so I could drive to the harvest fields where I had a job. I just put a can under the line and got the gas. I didn't know it was wrong."

"Take this man out and turn him loose," said the judge. "My conception of the law is that if a company lays its lines on the ground and lets the gas leak out and go to waste, it isn't thievery for someone to catch some of it. Case dismissed."

GEOPHYSICAL RESULTS

(Continued from Page 37)

ing shot holes. In places where fuel and water are particularly scarce, spudders may be more suitable. Light portable rotary rigs find their greatest value in places where water and fuel are available. The time of these two drilling methods is about the same.

Scarcity of water has created a problem of loading the holes. Many holes encounter no water and are drilled dry. Generally water has to be hauled in to load the hole, or else other means of holding the shot must be devised.

High velocities characterize shooting in the district. Velocities start around 8,000 feet per second at the surface. These increase to more than 16,000 feet per second down to the salt which is encountered at about 1,200 feet. Below the salt the velocities vary materially with an average of about 11,000 feet per second from the surface. Thus, at 3,000 feet, the reflection can go down and back in less than a second. To catch these reflections requires a high degree of efficiency. One of the many peculiarities is absence of reflections in the Cretaceous areas around Big Lake and McCamey. In shooting those areas no one yet has been able to show anything, and the geophysicists admit they cannot explain the condition.

Existence of a multiplicity of horizons has been one of the main handicaps to correlation and interpretation of horizons. The district is not like certain areas where there are definite horizons to shoot. In the district there also is a variability of formational conditions. There is much to be learned concerning the lower formations which have introduced the factor of uncertainty.

Torsion balance, gravitometer and magnetometer findings have been misleading in many instances due to the influence of regional features over local structures. On the Gulf Coast, the absence of regional features makes it possible for the torsion balance to pick up the local areas fairly easy. In the Permian Basin, local irregularities on the regional uplift, the Central Basin Platform, can be passed over, or on the other hand, nonexistent local gravity highs have been indicated on the instrument, or else the influence of the regional feature might make it difficult to tie the local feature down accurately.

An example of this unreliability was given in a gravity and magnetometer high which was shown to exist in an area near where the four counties of Borden, Howard, Martin and Dawson come together. Several companies checked almost simultaneously on this "structure" in a geophysical play which resulted in converging their work at that point. A "structure" of sizable proportions showed up, but drilling proved the area to be structurally normal, if not low.

The Permian Basin offers a virgin field for the application of geophysics on a wide scale when the present difficulties and problems in carrying on the work and interpreting the findings are overcome. The lack of surface features from which geologists can work out subsurface conditions has made development of production in the district more or less a haphazard proposition with operators depending largely on following trends for finding new fields. Geophysical science will minimize this element of chance and reduce exploration and development to a more systematic program.

Want to Be Called "Lilac Town"

BASIN, Wyo. — The 1,000 residents of Basin, near the Big Horn Mountains and amid big black-oil developments, want their municipality to be known as "Lilac Town." Nearly every householder planted lilacs and the Basin club placed 1,000 plants along the main highway.

New Jersey Standard Enjoined in "Esso" Trade Name Case

ST. LOUIS, Mo., July 10.—Esso, Inc., a subsidiary of the Standard Oil Co. of New Jersey, is enjoined from using the name "Esso" or any other derived from Standard Oil in the 14 states wherein the Standard Oil Co. (Indiana) operates in a decision handed down here Thursday by Judge George H. Moore in the U. S. District Court. The decree is a victory for the Standard of Indiana in its suit filed in 1935 following the opening of three service stations in St. Louis under the Esso banner by the Standard of New Jersey. Although the stations and their advertising stated they were "not connected with Standard Oil Co. (Indiana)" the court held that this was not enough to clear the New Jersey organization of infringement on the Standard of Indiana's rights.

Besides enjoining the defendant company against use of the Esso trade name the decree awards costs and damages to the Standard of Indiana, the amount to be determined by a special master.

The Esso company is enjoined specifically from using in the states of Missouri, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Montana, North Dakota, Oklahoma, South Dakota, Wisconsin, or Wyoming . . . the term "Esso," the letters "S O," or any names, terms, letters, marks, symbols, or syllables colorably similar in sound, significance, or meaning to any of plaintiff's trademarks or trade names, i.e., "S O," "S O C O," "Standard," "Standard Oil," or "Standard Oil Company," or any combination.

Standard of Indiana's claims to prior use of and exclusive right to these trademarks and terms in the territory involved were upheld and it was recognized that the term "Esso" is only a variant of them.

Under the decree neither Esso, Inc., nor Standard of New Jersey can sell any petroleum or related products in Standard of Indiana territory under any name indicating that they are Standard Oil products.

The court held that Esso's use of red, white and blue colors did not infringe on Standard of Indiana's use of the same colors so long as they were used without the word "Esso" or anything similarly identifying them with Standard Oil.

The suit was prosecuted by the St. Louis firm of Nagle, Kirby, Orrick & Shepley, by Everett Paul Griffin of St. Louis, and by Harry D. Nims of New York as special counsel on trademarks, guided by General Counsel L. L. Stephens of Standard of Indiana's legal staff.

To Fix August Demand

OKLAHOMA CITY, Okla.—At the request of Conservation Officer W. J. Armstrong, the State Corporation Commission has set Tuesday, July 27, for its monthly hearing to determine the market demand for Oklahoma-produced crude oil for August.

OBITUARIES

TERRENCE J. CONWAY, 53, oil man of San Antonio, Tex., died in his home there Wednesday, July 7.

WILLIAM C. ENSLE, 74, pioneer oil man of Rouseville, Pa., died in his home there July 7. For many years he worked in the oil fields of that region. In recent years he devoted much of his time to the construction and sale of dwellings.

FRED COE, 63, veteran employe of the Texas Co., died in his home in Ardmore, Okla., July 8 of bronchial pneumonia. Mr. Coe was born near the Drake well in Titusville, Pa., and had been in the oil business throughout his life. He leaves his wife and two sons.

STEWART GRAYSON GARRETT, 44, geologist for the Superior Oil Co., died of a heart attack in La Jolla, Calif., July 8. Mr. Garrett resided in Tulsa until a month ago, when he went to California in hope of regaining his health. He leaves his wife and a son.

J. H. FERRY, vice president and director of the Illinois Pipe Line Co., died in Lima, Ohio, where he resided. Mr. Ferry, born in Titusville, Pa., in 1873, entered the oil industry as a driller in the early days of the Lima field. In 1892 he joined the Indiana Pipe Line Co. and assisted in building its pipe line system. In 1905 Mr. Ferry was transferred to the Prairie Oil & Gas Co., for which he built and put into operation a number of pump stations. In 1907 he became chief engineer for the Ohio Oil Co. at the Bluffton, Ind., pump station. In 1913 he was made superintendent of the east half of the company's pipe line system, from Bluffton, Ind., to Negley, Ohio. Mr. Ferry was made a vice president of the Illinois Pipe Line Co. in April, 1930. He leaves his wife and five daughters.

Crude Oil Price Changes

All purchasers of crude in the Mirando district, Southwest Texas, adopted the Magnolia Petroleum Co.'s new price schedule in that field, each making the prices effective on July 6, as did the Magnolia. The only changes were in the lower grades. The schedule starts at below 21 gravity, 96 cents with a 2-cent differential beginning with 21 gravity at 98 cents and ending with 40 gravity and over at $1.36.

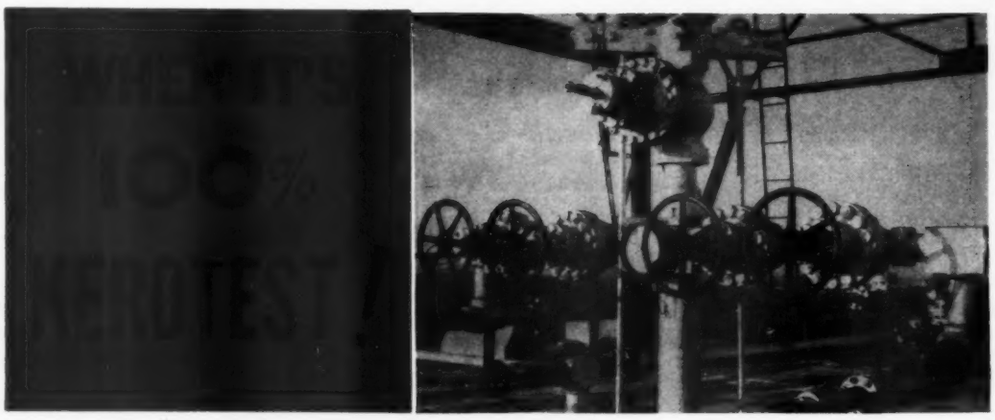
The Humble Oil & Refining Co. made a change in the prices of Refugio crude effective July 6. Refugio includes Saxet, Greta, O'Connor, McFadden, Taft, Plymouth and Tomoconnor pools. The new price starts at 20-20.9 degrees, $1.01, with a 2-cent differential up to 40 and over, at $1.41. The prices were met by other buyers.

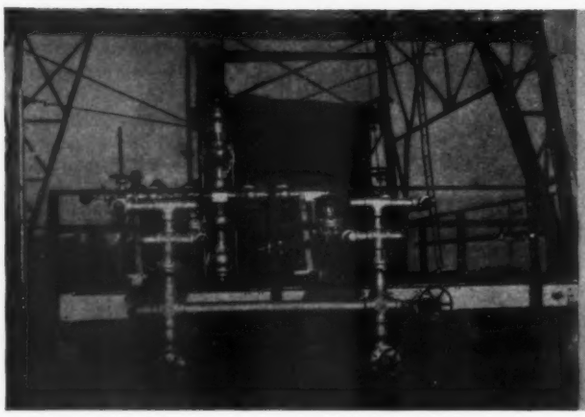
The new prices in the Mirando and Refugio districts represent small increases in the lower grades, ranging from 1 cent to 6 cents per barrel.

Effective July 6 Sun Oil Co. raised prices in the Government Wells field in Texas. The new schedule starts at 20-20.9 degrees, 96 cents, with a 2-cent differential up to 24-24.9 at $1.04. This schedule represents a general price advance varying from 2 cents up to 6 cents. The price change was made public on July 8.

In the Wilmington, California, field Edington Oil & Refining Co. posted a 5-cent increase in the price of oil in that field, effective at 8 a.m., July 6. The new prices are: On the west side, 17 to 18.9 degrees, 60 cents; 19 to 20.9 degrees, 65 cents; on the east side, 17 to 18.9 degrees, 65 cents; 19 to 20.9 degrees, 70 cents; 21 to 22.9 degrees, 75 cents.

KEROTEST





IT'S 100% SAFE!

We know and you know that Kerotest Drilling and Flow Line Valves are an absolute guarantee of safety and perfect control under all conditions of service —BUT DON'T STOP THERE—**follow through** your good judgment by specifying the equally well built Kerotest FORGED STEEL FITTINGS including HEAT TREATED RING FLANGE UNIONS, DROP FORGED CROSSES, TEES AND ELBOWS and last but not least, KEROTEST CONTROL CHOKES—the standard of precise oil flow control.

Remember all Kerotest Xmas Tree Fittings are not only subject to the same searching tests as the world famed Kerosene-pressure tested valves but also made of the same 100,000 pound test M.M. steel.

Thus in matching your Kerotest Xmas Tree Valves with genuine Kerotest Fittings you get the definite advantages of one standard of manufacture—one standard of testing—one standard of assembly and one standard of quality.

Why not centralize the responsibility 100 per cent with Kerotest and be 100 per cent safe. It's the logical thing to do.

KEROTEST MANUFACTURING CO.
PITTSBURGH, PENNSYLVANIA

KEROTEST

Oil News from Foreign Lands

Italy Busy in East Africa

The Azienda Generale Italinana Petroli (A.G.I. P.), the Italian government subsidized and controlled oil company, is preparing to construct several additional distributing outlets in Italian East Africa. In order to supply this and other markets, A.G.I.P. is scheduled to receive delivery during the last half of this year on three new motor tankers of 13,500 tons each.

Deliveries are now being made by A.G.I.P. in East Africa through its coastal station at Massaua. Enlargement of the wharving and storage facilities at Massaua and construction of another deep-water terminal at Assab are under consideration.

The A.G.I.P.'s consociate, the Societa Anon. Prahova, produced a little more than 2,800,000 bbls. of crude during 1936 from its concession obtained in 1935 from the Rumanian government. However, the Prahova's production is diminishing and the concerns are being forced into the open crude oil market for an increasing amount of their refining stock. The A.G.I.P. is continuing its research and drilling program in Italy, but without results so far. The work is chiefly in the Abruzzi, Marche, Tuscan-Emilian Appennines, Lucania and Sicily.

Brazil's New Refinery

The new refinery at Rio Grande, in the state of Rio Grande do Sul, Brazil, is to be commissioned this month and is expected to produce about 500 gallons of gasoline per day with lesser amounts of kerosene and fuel oil from Peruvian crude.

The operating firm was organized in August, 1936, and is commonly known as Ypiranga S. A., Companhia Brasileira de Petroleos. The firm has capital of 18,000 contos, or nearly $1,200,000 at the present rate of exchange. The company's office is at the port of Rio Grande and principal shareholders are business men from Argentina, Uruguay and Brazil. Col. Juan Ganzo Fernandes, who organized the telephone service in the state of Rio Grande do Sul and later sold it to the American Telegraph & Telephone Corp., is one of the chief shareholders. The general manager of the new refinery is Senor Clulow, who formerly was a member of the "Ancap" firm in Uruguay.

The new Brazilian refining company is understood to have negotiated a three-year contract with the Lobitos company (Shell) in Peru for crude supply. Design of the Rio Grande refinery is expected to yield 30 to 35 per cent gasoline from Peruvian crude and the operating schedule under this arrangement will produce about 600,000 to 700,000 liters of gasoline per month when maximum runs are attained. The production will supply about 25 per cent of the consumption in the state of Rio Grande do Sul. The first cargo of crude oil from Peru, amounting to 10,000 tons, was scheduled to have reached Rio Grande during the first week in July.

Most of the current consumption in the state of Rio Grande do Sul, slightly more than 600,000 gallons per month, is supplied principally by Standard Oil Co., Royal Dutch-Shell, Texas Co. and Atlantic. Including gasoline and kerosene, it is estimated that Standard has about 40 per cent of the business.

Executives of the new Rio Grande refinery are hopeful of establishing distribution through facilities of the established companies in Rio Grande do Sul. Reports from Brazil indicate that the new company will attempt to force this procedure by underselling if satisfactory arrangements cannot be reached.

While the Rio Grande refinery's concession does not exempt it from the payment of state taxes, it is reported to be the intention of the company to enter a portion of its products in the name of the Distillaria Rio Grandense de Petroleos Ltda., at Uruguayana, whose concession provides for exemption of state taxes. An official of the new company, however, has declared that it is strictly a private commercial venture and that price-cutting will not be attempted unless the concern has difficulty in disposing of its products.

French Tanker Decree

With its national oil refinery program completed for all practical purposes, France is now turning to the question of nationalizing oil tanker transportation facilities. A decree has been issued by the government compelling petroleum import licensees to import at least 50 per cent of their total requirements in solely owned tankers after October 1. If this condition cannot be fulfilled, oil may be imported in outside tankers, provided the charter parties are approved by the government. The transportation order is the culmination of a French oil policy which has existed for several years to establish a fleet capable of carrying a large part of the oil purchased abroad.

French tanker tonnage now totals 455,840 tons, or about 4.8 per cent of the world total. Although the French tanker fleet has doubled its tonnage since 1925, it has been unable to keep pace with the increasing import requirements which are now more than three times the 1925 figures. It is now capable of handling only about 25 per cent of the nation's import requirements, and several years probably will be required to meet obligations imposed on companies holding import permits by the government decree.

To Nationalize Cuban Oil

Introduction of a bill in the Cuban congress to nationalize that island's oil production on lines similar to other American nations started broad speculation as to just what information may be available to Senator Jose Manuel Casanova, which so far has gained no public distribution.

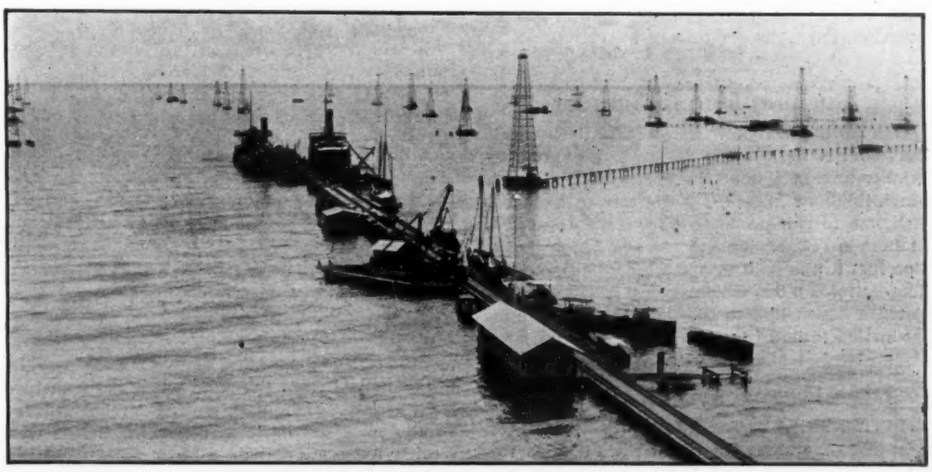
In an announcement at Havana, Senator Casanova said that Cuba has subsoil petroleum reserves sufficient to make her one of the most prosperous countries in the New World. Casanova, who is president of the Cuban Sugar Institute and head of the Social and Economic Union, said United States minerologists and engineers had definitely established the existence of huge oil reserves. He said that not only in one section, but nearly everywhere in six Cuban provinces, geologists had found signs of petroleum. At the Motembo field in Santa Clara province, he said, there was pure naphtha and Oriente, Havana and Camaguey provinces were also known to contain some production.

Existence of small production in Cuba has been known for several years and the island has contributed a small amount of distillate and crude oil annually. The production, however, has been far below the island's requirements and there has been no widespread interest in the country's producing industry.

Oil Agents Arrested

Refusal of American, British and Rumanian oil company agents to comply with a municipal order in Smyrna setting the price of gasoline resulted in their arrest. The men later were released, but officials were quoted as saying they would have to stand trial. On June 25 import duties on gasoline and oil were reduced 50 per cent and the municipality of Smyrna considered that the whole reduction should be passed on to the consumer. The companies contended that prices in Turkey had left them in the last year with a loss and they decided to give consumers some benefit from the tariff reduction, but to take the opportunity to put prices on a level bearing what they deemed a proper relation to world prices. This policy was followed at Instanbul, apparently with the municipality's approval, and prices in Smyrna were similarly fixed with due regard to increased costs of freight and handling.

Under the action of Smyrna the companies were called upon not only to continue uneconomic prices, but to suffer the increased loss on stocks of gasoline and oil which were imported under terms of the higher duties. Arthur W. Drake, manager of the Socony-Vacuum Oil Co., was one of the representatives arrested.



La Rosa pier of the Lago Petroleum Corp. on Lake Maracaibo, Venezuela. Two tankers are seen tied up at outer end of pier

Pipe Line Activity

United Pipe Line Co.'s new Cass booster station on its 8-inch crude oil line from the Rodessa field to Kilgore, Tex., where it is delivering to the Shell and Atlantic. Steam turbines are employed to drive centrifugal pumps

Making Progress on Loops

BOONVILLE, Mo.—Ditching, painting and riveting crews of the E. H. Reeder Construction Co. will soon start on the second loop of the three-loop Missouri parallel pipe line for the Panhandle Eastern Pipe Line Co. The 47-mile loop in the system from Louisburg, Kans., eastward has been almost completed. As soon as the line is finished, the crews probably will be divided, one group going to the Houstonia-Boonville loop and the other to the Centralia loop.

Preliminary work is under way by Williams Bros. Corp., Tulsa, for laying pipe line under the Missouri River about a half mile west of the Missouri-Kansas-Texas railroad bridge. Clearing crews have finished work on the Houstonia loop and have moved to the Centralia loop, which consists of 22 miles. Twenty-four inch pipe is being laid throughout the parallel system.

Rio Grande to Build Line

McALLEN, Tex.—The Rio Grande Valley Gas Co. will construct a pipe line 9 miles long from the La Blanca gas field in Hidalgo County to its main line at a point near Donna. Announcement of the project follows signing of a contract for purchase of natural gas produced by the McDougall & Pantano wells in the La Blanca field and all gas produced on the 1,100-acre tract.

Rushing Line in Schuler

EL DORADO, Ark.—The Lion Oil Refining Co. has been rushing work on its 8-inch line to the new Schuler area of Union County, to supplement the 4-inch line now in use. It is the plan to use the 8-inch line to run production from the company's El Dorado refinery and to use the 4-inch line to pipe fuel to the field to operate drilling rigs. The Root Petroleum Co., which several weeks ago completed a 6-inch line to the new field, is running production to its El Dorado refinery.

Buys Prospective Gas Output

BROWNSVILLE, Tex.—Joe Jordan, vice president and general manager of the Rio Grande Valley Gas Co., announced the company has contracted to purchase gas production on a 1,100-acre tract near Edinburg, and had asked the commissioners court of Hidalgo County for permission to construct 9½ miles of mains to the new property.

The mains will be constructed from two gassers in the La Blanca field, the McDougall and Pantano wells, and will connect with the gas company's main valley line north of Donna, Mr. Jordan said.

Gas from these wells was purchased on a 10-year contract, and the contract also includes additional gas from wells to be drilled on the 1,100-acre tract of the two companies in the future.

Gathering System in Saxet

The Crown Central Petroleum Corp. will begin soon the laying of a gathering system in the Clarkwood section of the Saxet field in Nueces County, Southwest Texas. Serving 18 of the company's wells in the field, the system will include a 10-mile 4-inch line joining the two 10,000-bbl. field tanks to a terminal near the ship channel in Corpus Christi harbor.

Phillips Line in Cass County

JEFFERSON, Tex., July 12.—The Phillips Petroleum Co. has pipe stacked at Jefferson for a 4-inch line from its proposed $700,000 gasoline plant in the W. R. Meyers Survey, Farrier lease, in the Cass County field, to the Texas & Pacific Railroad near Hunter production in the Lodi area, a distance of about 8 miles. The company is planning erection of a loading rack and will move its gasoline to the loading rack, providing for an outlet.

Natural Gas

Columbia G. & E. Files Appeal

HARRISBURG, Pa.—The Columbia Gas & Electric Co., of New York and Delaware, has appealed from settlement of a franchise tax for the first 10 months of 1935 amounting to nearly $200,000. The utility moved from the state when the franchise tax was imposed in 1935, placing foreign utilities on the same tax basis as domestic. Before that foreign corporations paid a 5-mill assessment tax on tangible property within the state.

The Columbia company questioned the constitutionality of the franchise tax in general and especially as it applies to the Columbia system. Its franchise tax before 1935 was $1,200. The settlement from which the concern appealed was for $192,000.

The company has announced it planned to pipe gas from West Virginia into Harrisburg, Philadelphia and other parts of the state, but has not yet started the service.

Union Gas Board Chosen

TORONTO, Ontario.—Shareholders of the Union Gas Co. of Canada, Ltd., at their annual meeting here reelected the following directors: S. A. Morse, president and general manager; D. A. Coste, W. L. Duffield, R. L. O'Brian, C. M. Kennedy, D. P. Rogers, W. J. K. Vanston, Arthur F. White.

Gas Rates Reduced

LOS ANGELES, Calif.—Rate reductions to bring an annual saving of $225,000 to its customers were put into effect July 1 by the Southern Counties Gas Co. President Ware of the California Railroad Commission said the reduction resulted from an informal investigation by commission officials. The "three-use" schedule was eliminated. Under its operation customers using gas for house and water heating and for cooking and whose bills were between $2 and $25 a month received preferential rates.

Gasoline Consumption Rises

WASHINGTON, D. C., July 12.—Gasoline consumption reached an all-time peak of 246,000,000 bbls. in the first half of this year, according to an estimate supplied Secretary of Interior Ickes by the petroleum conservation division.

In the first half of 1931 consumption was 192,000,000 bbls. and for the two subsequent years it fell to 178,000,000 bbls. and 176,000,000 bbls. respectively. It turned up again in 1934 with 195,000,000 bbls. used in the first six months of that year. Since then consumption has increased steadily in the first half years as follows: 1935, 201,000,000 bbls.; 1936, 221,000,000 bbls.; 1937, 246,000,000 bbls.

"The number of automobiles in use and the extent to which they are being used are the key to prosperity in the petroleum industry," says the report to Mr. Ickes. "It is estimated on July 1, 1937, there were 27,000,000 automobiles in use. During the first six months of 1935, 1,716,000 new cars were registered. In the first six months of 1936, 2,171,000 and it is estimated that during the first six months of 1937 the registration of new cars was 2,472,000.

"The annual consumption per car of 705 gallons in 1933 increased to 727 gallons in 1934, to 747 gallons in 1935, to 779 gallons in 1936.

"With more money to spend, more new highways available, trips are not only more frequent but also longer. Vacations that were spent close to home only a few years ago are now being spent in distant places."

Crude oil exports also increased about 2,000,000 bbls. during the first quarter of this year, less than two-thirds of a single day's production.

Motor Shipments Up 12 Per Cent

NEW YORK.—Although June shipments of automobiles in the United States and Canada slumped slightly compared with May, the total of 525,983 units is 12 per cent higher than for the same month in 1936, according to the Automobile Manufacturers Association. The industry's shipments for the first six months of the current year were placed at 2,922,264, which is 13 per cent above the corresponding period last year. The first half volume this year is the largest in the history of the automobile manufacturing industry with the exception of the first six months in 1929.

Refinery Expansion

Completing Cracking Unit

United Refining Co. of Russell, Kans., is nearing completion of its new 2,000-bbl. Donnelly cracking unit at its plant 5 miles west of Russell. The company is now operating its 1,200-bbl. skimming plant at 850 bbls. daily, refining western Kansas crudes. F. E. Reinhardt is president of the new company.

Shallow Water Plant Operating

Shallow Water Refining Co. is starting operation of its new 1,500-bbl. skimming plant in the Shallow Water field of Scott County, western Kansas. The plant will operate on crude from three Mississippi lime wells of Atlantic Refining Co., and will produce road oils, blown asphalt and diesel oils as well as gasoline and other products.

Gas Purification Plant

PITTSBURGH, Pa.—Atlantic Refining Co. this week is placing in operation at its Philadelphia refinery the first plant in the East which will purify refinery gas by the new Koppers phenolate process. The plant was erected by Koppers Co.'s engineering and construction division and will be able to recover the hydrogen sulfide from 22,000,000 cubic feet a day of refinery still gases at 225 pounds pressure. The hydrogen sulfide may be converted to sulfuric acid and the purified still gas will be further processed by polymerization.

The purification system consists of an absorption stage and an actification stage, through which the phenolate solution is circulated continuously. This solution has an extremely high carrying capacity for hydrogen sulfide, and as a result, it is necessary to circulate only 5 to 10 gallons of solution per 1,000 cubic feet of sour gas.

Koppers also has just completed a similar type of plant to purify natural gas at Wayne, W. Va., for the Chartiers Oil Co. It will be placed in operation about August 1, and will have a capacity of 5,000,000 cubic feet a day.

Old Dutch Reorganizing

MUSKEGON, Mich.—Reorganization of the Old Dutch Refining Corp. is in progress with prospects of resuming operations within a few weeks, it was announced here. J. H. Bender, who became vice president in charge of operations when former-president John Borden announced his retirement last February 15, has been named president and general manager.

M. S. Riglander, of Bartlesville, Okla., and Adlai E. Stevenson, Chicago attorney, have been named new directors, the former to succeed Mr. Borden and the latter as an addition to the board, it was announced by F. H. Duggan, acting secretary succeeding Nicholas Buining, resigned. The company will select a new superintendent to succeed W. R. Newman. Other personnel changes are expected to be completed in a few weeks.

Buys West Tulsa Refinery

Sonken-Galamba Corp. of Kansas City, Kans., has purchased the now shutdown Producers and Refiners Corp.'s plant in West Tulsa and is negotiating to have the refinery reopened. The plant, which was taken over by Sinclair Refining Co., upon the merging of the corporation with Sinclair, has a skimming capacity of approximately 6,000 bbls. daily and contains two Dubbs 1,500-bbl. cracking units.

The refinery occupies a tract of about 70 acres with a storage capacity of some 1,000,000 bbls. Office building and other plant buildings are intact. The company plans to dismantle the refinery if negotiations to reopen the plant fall through.

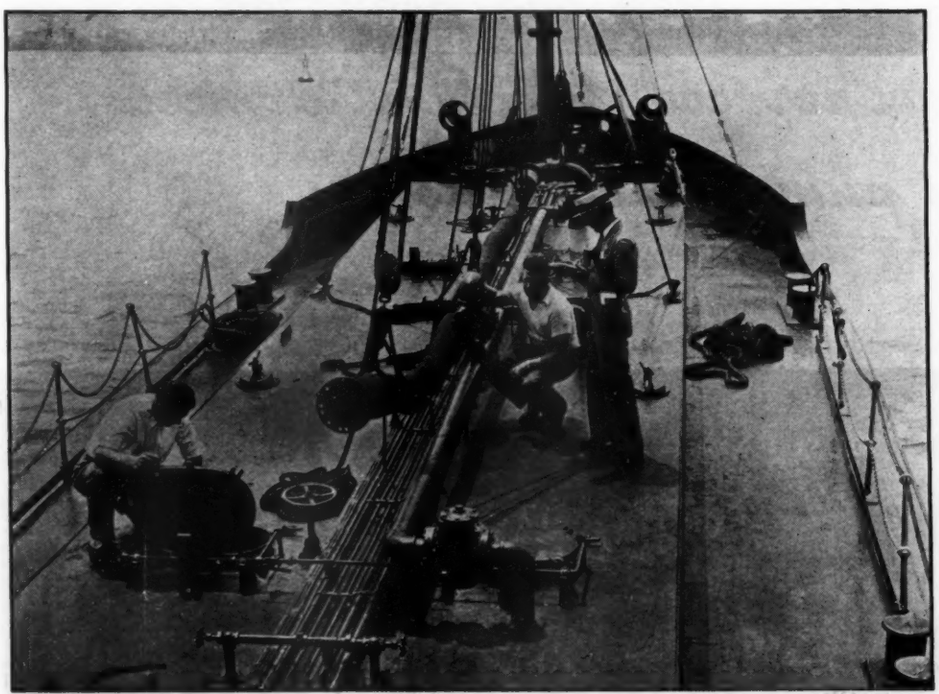
Socony-Vacuum Expands Plant

NEW YORK.—A two-story addition to its grease compounding plant near Franklin, Pa., is to be erected at once by Socony-Vacuum Oil Co., Inc., as part of a $250,000 expansion program at Buffalo, Cleveland and Franklin. Approximately $50,000 will be expended on the erection and equipping of the new building.

Ohio Planning Wyoming Plant

DENVER, Colo.—Ohio Oil Co. is planning the erection of a road oil processing plant and refinery to handle production of the Byron-Garland fields of northern Wyoming. The company will lay an 8-inch line from the fields to Lovell, Wyo., some 15 miles, where it has purchased a site.

ROUND-UP OF OIL TANKERS



Inspection of some 3,000 oil tankers in the New York and other ports of the country, is being carried out by the U. S. Bureau of Marine Inspection and Navigation under the provisions of the new shipping law. The accompanying illustration shows Inspector R. E. Combs (left) examining a gasoline vent on the tanker J. J. Kelly in New York harbor. Capt. Harold Johanessen is explaining to Inspector George Donaldson (standing) the operation of the system, which releases a blanket of carbon dioxide to smother the flames in case of fire.

Natural Gasoline

Plan North Texas Plant

FORT WORTH, Tex.—Deep Oil Development Co. of Wichita Falls, which has been developing Canyon lime wells in the deeper pay zones of the Kemp City pool in southern Wichita County, and which previously built a repressuring plant in the Chalk Hill pool of Archer County, is now preparing to start construction on a second repressuring and natural gasoline plant. The plant is to be located on the company's Munger lease in Block 30, Wichita Valley Farm Lands, in the Kemp City pool, and is to have a daily capacity of 900,000 feet of gas.

Skelly to Build New Plant

Skelly Oil Co. is planning the erection of a new gasoline plant in the Eunice field of Lea County, New Mexico. Construction of the plant, which is to be located in section 27-22s-37e, will begin shortly, J. W. Vaiden, manager of the natural gasoline department, announced. The plant will be of the absorption type and will have a daily gas capacity of 20,000,000 feet, from which some 15,000 gallons of natural will be extracted daily. Petroleum Engineering, Inc. refractionating equipment will be used and the plant will contain nine 230-horsepower compressors.

New Louisiana Plant

SHREVEPORT, La.—Work on a new gasoline absorption plant, in the Simsboro area of Lincoln Parish, Louisiana, will be started at once by the Arkansas Fuel Oil Co. The plant will have a daily gas capacity of 30,000,000 feet and will tie into gas-distillate producers in the Montcalm area.

Texas Plant Applications

AUSTIN, Tex.—The Texas Railroad Commission has ordered operators of natural gasoline extraction plants to file applications for permits by August 1 in accordance with a gas conservation law passed by the general session of the legislature. The bill by Senator Clint Small placed restrictions upon the commingling of sweet and sour gas, limited to 750,000,000 feet the daily maximum outlet of sour gas for carbon black purposes, and prohibited operation of plants commingling the gases without a permit from the commission.

Service records of National Sucker Rod performance substantiates the claim that proper rod selection, to fit the particular pumping condition, is an absolute necessity for efficient, economical performance.

To assure National Sucker Rod users peak efficiency and economy, our engineers have made extensive surveys of pumping conditions in various fields. From this accumulated data they are prepared to make the proper rod selection to meet any pumping condition.

NSCO
REG. U. S. PAT. OFF.

National

THE NATIONAL SUPPLY COMPANY OF DELAWARE

DIVISION OFFICES: PITTSBURGH, PA., FORT WORTH, TEXAS, TULSA, OKLA., TORRANCE, CALIF. • MAIN OFFICE: TOLEDO, OHIO

ENGINEERING AND OPERATING SECTION

Presenting modern developments in operation of producing properties, refineries and gasoline plants, and pipe lines, including petroleum research in the field and laboratory

This Week

SHELL LIGHT PORTABLE RIG COMPLETES FOUR WELLS IN 38 DAYS—By T. P. Sanders ..... **Page 69**

Exemplifying speed with which operators are drilling wells with light portable rotary equipment, a drilling crew of Shell Oil Co. recently completed four wells in the Mount Poso field of California in 38 days total time. Presents new practices inaugurated by company to make such drilling speeds possible.

HANDLING DRILL-CUTTING SAMPLES AN ORGANIZED FIELD PROCEDURE—By Paul Reed ..... **Page 56**

Importance of properly taking and storing rotary-drill cutting samples is often underestimated. Sample washing and check routines as adopted in Oklahoma are described. The check and rigid regulations adopted promote economy in handling samples.

PURE OIL USING THREE FURNACES ON NEW COMBINATION UNIT—By George Weber ..... **Page 60**

Pure Oil Co. recently completed 15,000-bbl. combination skimming and cracking unit at its Smiths Bluff, Tex., refinery. Initial runs are described. Installation includes three furnaces and latest developments.

ILLUSTRATED OPERATING IDEAS ..... **Page 63**

Chemical proportioning device provided with automatic shutoff. Means for expediting drying of drill-cutting samples. Separator and tank battery assembly for gas-distillate well provided with automatic vent. Drum rack made from strap iron and old tubing.

PROBLEMS FROM READERS—By L. G. E. Bignell . . **Page 79**

Use of superheaters on drilling rigs. Repressuring small lease in Shackelford County, Texas. Correlation of producing strata in West Texas and New Mexico. Ways of finding oil structures.

LOW LUBRICATING STOCK LOSS IS FEATURE OF NEW LION OIL VACUUM FILTER—By J. J. Allison and J. B. Rogerson ..... **Page 73**

Precoat vacuum filter installation in operation at Lion Oil Refining Co.'s El Dorado refinery is yielding a filtrate requiring no after-clarification. Filter and its operation are described.

REVAMP EAST TEXAS LINE TO GAIN GREATER EFFICIENCY—By Mitchell Tucker ..... **Page 68**

Sun Pipe Line Co. and Yount-Lee Pipe Line Co. recently rearranged their East Texas crude-gathering facilities, thus greatly reducing line and station pressures. Arrangement of pumping facilities is described, and advantages are stated.

FUNDAMENTAL MECHANISM OF SOLVENT OIL REFINING—By John W. Poole ..... **Page 64**

Yearly increasing in importance, solvent extraction occupies a vital position in the refining industry. This, the third of a series on solvent extraction theories, discusses its basic mechanism.

QUESTIONS ON TECHNOLOGY — By C. K. Francis, Ph. D. ..... **Page 77**

Inhibitor or slushing compound for preventing rust. Analytical methods for determining free sulfur in gasoline. Significance of carbon residue for asphaltic fuel oils. Sulfur as related to lead susceptibility.

X-RAY EXAMINATION OF PRESSURE VESSELS SAFEGUARDS REFINING INDUSTRY—By W. L. Nelson . **Page 71**

Application of x-rays in examination of pressure vessels aids the refining industry, as a thorough superficial examination of welds and metal parts often fails to indicate an interior defect. Means of identifying various defects are described.

Samples sacked wet and hung so that labels will not be defaced by water in the samples

Handling Drill- an Organized

By PAUL REED

Demand of the major companies for drill cutting samples has promoted the growth of intercompany organizations known as "sample checks" which function for the purpose of providing participating companies with samples from drilling wells throughout the districts where they operate. Some of the features of this network are products of the depression when curtailment of expenses threatened to deprive the geologist of samples. By devising ways for carrying on this program jointly with an economy of effort for all concerned, it was possible to continue the sample gathering system and increase its effectiveness. The check is a geologists' organization. Since sample washing operations are closely connected with the functions of the check, sample washing practices and sample check routines adopted in Oklahoma are reviewed together in this article.

Functions of the Check

The industry is becoming familiar with the fact that the term "check," when used in connection with the sample program, refers to the whole organization involved in the gathering and distribution of samples. The scouts' "check" is a meeting. In each district the sample check gets its work done by a scheme of procedure adapted to local conditions, which is a result of a process of evolution in recent years and recent months. No two checks follow the same plan. However, in the course of time there is likely to be more uniformity as the advantages of certain features are recognized. It can be observed that a general satisfaction prevails today with check operation which is in contrast with conditions existing a few years ago when it is recalled that one check divided samples at a check meeting. Sitting at the head of the table, the czar took his cut first and passed the sample around. This was hard on the last man, for there might not be any left when his turn came. The present practice is to have samples cut for a list of oil companies wishing samples; this list is furnished the sample washer. At the Tulsa check this list is made up at the weekly meeting. At other checks requests for cuts are made to the czar or to the sample washer and notations are made in a scout book kept for the purpose.

The check in each of the large districts in the state has a different method of assigning the work of gathering samples to different companies. At the Tulsa check this is thrashed out at the weekly meeting. In the Enid and Shawnee districts it has been found from experience that when samples are wanted from a well being drilled by an independent operator, there is always one major company which is watching the well with special interest. The czar designates this company to bring in the samples. It has been found that the delivery of samples to the check can be speeded up by providing that any geologist or scout visiting a well may bring in any samples on hand. When doing this he signs for them on a board at the well giving date and depth of the samples.

The Ardmore district, which extends across the southern end of the state and into adjacent areas in Texas, is so large that it has been found to be most practical to subdivide this into six districts. Each of these districts has between two and five counties. Each of these districts is assigned to a group of companies responsible for bringing in the samples. The number of companies responsible for a district varies between two and four. By a system of rotation the burden of the work is lightened and equalized.

Out of the situation at Oklahoma City there has developed a unique system of check procedure which is adapted to this area confined for the most part within a 50-mile radius where a plan has been devised for getting daily contact with each drilling well. Considerable discretion has been required to see that all companies participating in the organization carried an appropriate share of the burden of the work. Because the district is small as check areas go, the work on contacting drilling operations has been divided so as to require a representative from each company to make a field trip on only one morning in the week. The area is divided into two zones.

Interior of sample dog house showing rack, for samples cut for other companies, above the pans and stove for drying the cuttings

Most of the work of picking up samples is done by geologists with some assistance from scouts. Each morning a representative from one company covers the west zone, which mostly lies to the south, and a representative of another company covers the east or north zone. At noon they return to Oklahoma City; samples are left at an appointed place; these two representatives exchange scouting information by phone; and then each of them calls up the geologists of the other companies in the check which are assigned to covering the same end of the area.

To show how this works out, an example of a recent weekly schedule with regulations adopted is given. On the original schedule, from which this is taken, a telephone number is given after the name of each company.

NEW SCHEDULE

	West, south, W.	East, north, E.
Monday	Carter	Gulf
Tuesday	Magnolia	Phillips
Wednesday	Tide Water	I.T.I.O.
Thursday	Anderson-Prichard	Ellison
Friday	Shell	Texas
	Empire	Transwestern
		Continental

General Regulations Adopted

1. When samples are picked up at a well, the sample-grabber writes down on the board or other record provided for the purpose, the following:

Date..... Samples: From..... to.....

Skips ..... Signature.

2. Cloth sacks for any well are to be supplied by the company cutting the well, unless other arrangements are individually made. However, men making the wells should note the supply of sacks ahead, inform the cutting company if the supply is getting low, and should leave sacks if the supply would not last until the next pick-up and then inform the cutting company of the debt.

3. The geologist or scout in charge of a well should make careful and definite arrangements for samples on his well just before the regular pick-up starts. If more than one set of samples is to be saved on a well, special care should be taken that separate places be designated and marked so that (1) the drilling crews will not get the samples confused and (2) so that the sample-grabber will get only those he is supposed to get—those marked "Oklahoma City."

4. Samples in sample sacks, unless by special arrangement, are to be left at the Colcord Parking Lot. Samples in sample envelopes are to be left at the laboratory most convenient to the sample-grabber. At least one sample in each bunch should have the name of the well plainly labelled, or a tag with the name of it tied to the bunch.

5. Generally the company cutting or filing samples on any well should make is own arrangements. Also, it is to be emphasized that each company desiring samples on any well should make its own arrangements for a cut of the samples with the company cutting the samples. On the daily dope sheet the company cutting the samples will be mentioned once.

6. Scouting information is to be obtained by the sample-grabber, exchanged between the two companies making the district that day, the other companies divided between them and called (suggest west call west, and east call east). Dope sheets

Cutting Samples Field Procedure

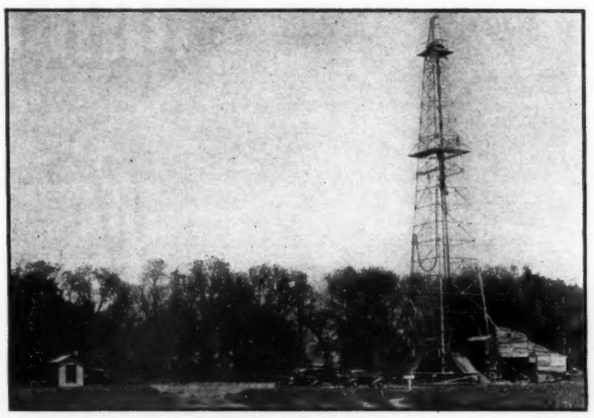
for this purpose will be outlined each week by the Carter, printed by Anderson-Prichard, and left in the company sample boxes in the Gulf laboratory by noon Saturday.

Attached to the sheet with the schedule and regulations are comments of the czar, Gerald C. Maddox, geologist for the Carter Oil Co., which might be called a "ukase" if it were not for the tactful wording. Entitled "Remarks and Suggestions" it begins: "Generally, the organization continues to function in a satisfactory manner; however, during the last month or two there has developed some room for improvement. It is hoped that the following remarks and suggestions will eliminate the time and trouble of another meeting of the group soon." Then comments follow on the ways in which the carrying out of each regulation might be improved, ending with "if the above does not cover the front, let us know and a meeting will be called."

Czars directing sample checks in Oklahoma this spring have been E. A. Dawson, Texas Co., Shawnee; G. C. Maddox, Oklahoma City; H. E. Lillibridge, Eason Oil Co., Enid, and Don O. Chapell, Shell Petroleum Corp., Ardmore. The Ardmore check has a secretary-treasurer, W. M. Guthrey, Texas Co.

The washing of samples is provided for in two ways. At Tulsa, Oklahoma City, and Shawnee, each of the major companies washes its own samples.

At Shawnee, sample washing operations are carried on in booths rented in the basement of the Masonic Building. In most of these samples are washed for from one to three companies. Amerada washes for Pure; Stanolind washes for Sun and Continental; Skelly washes for Ross and Champlin; and Shell washes for Texas. At Enid and Ardmore all sample washing is done in the community sample laboratory serving the 17 companies in each of these checks. The laboratory is run as an independent business by the man in charge. For the services of the laboratory, each participating company pays $11.50 per month at Enid and $17.50 per month at Ardmore. More samples are handled at Ardmore requiring the services of two men, while one man handles the work at Enid. The cooperative arrangement has proved so satisfactory that it is predicted by those who have watched it that this will eventually be adopted by other districts.



Sample dog house, Ohio Oil Co., Langston district

Sample washing is carried on under a variety of conditions. Some companies maintain sample washing laboratories which are well lighted, well equipped and well arranged. Some of these could be compared to the adequate scientific laboratories in other branches of the industry. From these best types they range on down to dens in the cellars of office buildings where sample washing equipment is crowded close to the place where the janitor keeps his brooms. The size of the company furnishes no indication of the facilities afforded. The method of preparing the cuttings for examination under the geologist's microscope has been devised with regard for the intensive lithologic studies which are characteristic of Mid-Continent practice and which are carried on continually. Paleontology comes into play principally in the drilling of unfamiliar territory.

Although most sample washing is done at company or check laboratories, some companies make a practice of completely washing, drying and cutting at the well. To facilitate this, the sample dog house has come into the picture, equipped with proper facilities for doing this work. In this connection it may be mentioned that sample facilities have been motorized where "sample wagons" have been furnished geologists sitting on wells in such areas as western Kansas. These are light covered cars or trucks of the beach wagon type providing an inclosed room for a bed, microscope table, electric light and plumbing for washing.

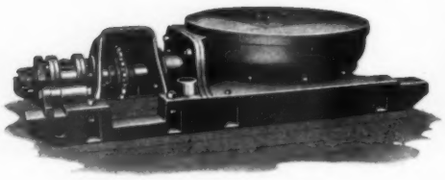
As it was pointed out in the early years of systematic examination of rotary samples, "special care is necessary in the washing of rotary cuttings, since each individual fragment of sand, shale, and limestone as it comes from the well is coated with a thin film of rotary mud; it is absolutely impossible to distinguish one type of rock from another, unless this coating of mud is removed by a thorough washing of the sample."[1]

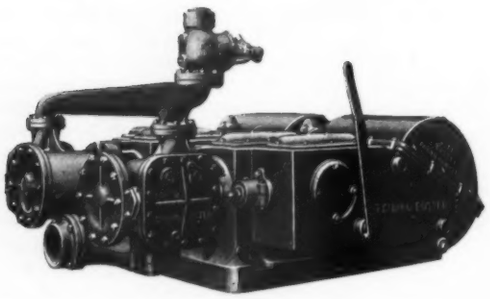
There is considerable difference in the condition of samples arriving at a sample washing laboratory. Some crews do such a thorough job of washing that no subsequent washing in the laboratory is needed. At the other extreme are samples with rotary mud caked on them, requiring a soaking for a day or more. Some geologists like to have samples brought to the district office damp, after the rinsing given at the well, provided the samples are brought in every day. However, they prefer to have

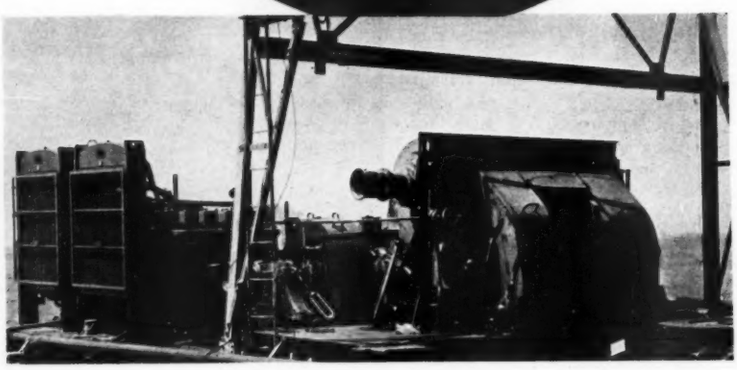
Sample washers of Amerada, Stanolind, Skelly, Phillips and Shell work in booths in basement of an office building in Shawnee, Okla.

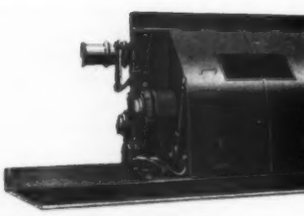
BRIDGEPORT Leads

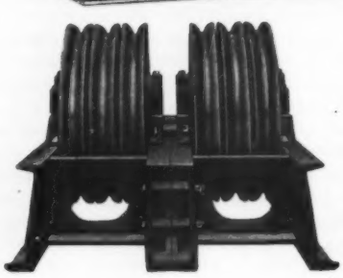
IN THE DISTRIBUTION OF *NEW and MODERN* DRILLING MACHINERY











BRIDGEPORT MECHANICAL ROTARY DRILLING RIGS powered with WAUKESHA gas-gasoline-butane Engines; or with CATERPILLAR DIESEL Engines; GUMBO BUSTER Rotary Machinery; NATIONAL TUBE Drill Pipe; and Tools and Accessories of the most modern and latest types, are always *immediately available* from Bridgeport stocks, *at terms to fit the operating requirements, and at prices which are always competitive.*

A telephone call to our nearest representative will bring specifications, prices, terms and prompt deliveries, whenever and wherever the equipment may be needed

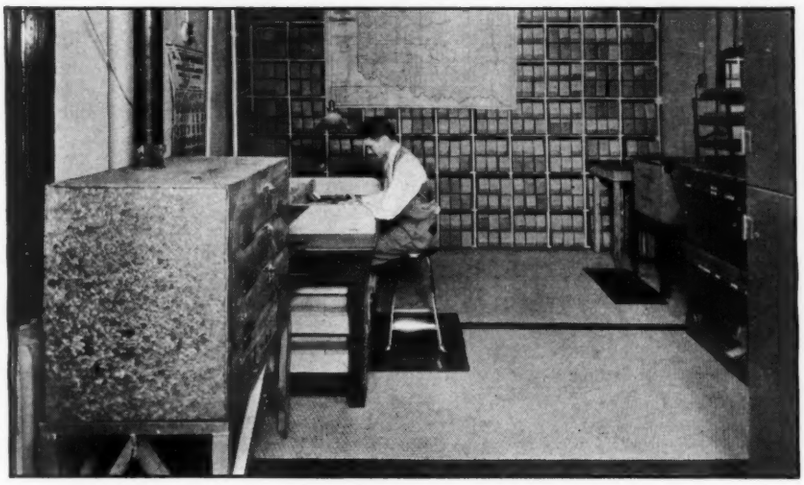
BRIDGEPORT
MACHINE COMPANY
MANUFACTURERS DISTRIBUTORS
OIL DRILLING-FISHING AND PRODUCTION EQUIPMENT
GENERAL OFFICE AND WORKS WICHITA KANSAS

Houston - Dallas - San Antonio - Corpus Christi - Odessa - Shreveport
Tulsa - Oklahoma City - Wichita - and Branch Stores

samples dried at the well if they are brought in once a week.

Two methods of washing are used. The simpler is that of washing in cup or sauce pans. The faster one uses a specially designed machine, invented and patented by John E. Van Dall, now chief geologist of the Oklahoma district of the Magnolia Petroleum Co.

According to the present routine, the roughneck catching the sample at the well is expected to give it a rough flushing to remove most of the rotary mud before the sample is sacked. The sample washer in the laboratory gives it a thorough washing to remove all rotary mud so that clean cuttings may be furnished for microscopic examination. By the simpler method this is done by alternately flushing and decanting the sample in a cup or sauce pan of types that can be bought at a dime store. This operation seldom takes more than two minutes to a sample. Some companies use this method for all samples.



Sample washing laboratory, Transwestern Oil Co., Oklahoma City, showing drying oven (left), cutting table, sample storage (rear) and sample washer (right background)

In the community laboratory that serves the Enid check, the laboratory man, Martin Stuart, washes samples in baker's tins (3½ by 2½ by 1 inches). Due to their square shape they fit compactly on the stoves.

One major company in Oklahoma City washes samples on a device which operates like a drinking fountain and squirts water up through a screen under the sample.

Pan of samples drying over burners set in stoves made from old casing. Pans are slanted for proper drainage and evaporation. Ardmore community laboratory

Where laboratories are equipped with a Van Dall sample washing machine, samples which are finely pulverized are often washed by hand methods.

Van Dall machines are not in commercial production. Altogether, 15 have been built; 14 of them for major companies operating in the Mid-Continent and one for the Canadian government at Calgary, Alberta. The washer was the result of need for more efficient washing of cuttings from wells drilled by the rotary method. However, it is also being used successfully to wash cuttings from cable tools, unless the cuttings are fine, free, or possibly pulverized while drilling with several hundred feet of water in the hole.

The machine consists essentially of a tank in which a "paddle" rotating on a horizontal axis carries the samples (in individual containers) through water and agitates them at the same time. The paddle is a framework consisting of a brass casting and iron rods. Power is transmitted from an electric motor by pulleys and a V-shaped belt to a worm gear, and then by other pulleys and a V-shaped belt to the paddle, which is turned at approximately 24 revolutions per minute. The water level in the tank is kept at a point which approximately coincides with the axis of the paddle by means of an overflow, and the water is being constantly renewed throughout the operation.

The containers used are cast aluminum (3½ inches long by 2½ inches by 2 inches deep) and the bottoms are equipped with brass wire mesh (standard size No. 50 mesh). The lids are also cast aluminum and equipped with brass wire mesh, too. Sixteen of these containers are placed in the paddle and are secured by another framework which is fastened to the paddle with a large thumb screw. Two or three minutes will thoroughly clean a set of 16 average samples. Contamination of the sample is impossible while washing, as there is generous clearance between the bottom of the tank and the edge of the paddle while the latter is in motion. Thus the heavy mud accumulates in the bottom of the tank and can be removed occasionally with a scoop while the very fine particles pass off through the overflow.

After washing, the containers are placed in a handy portable rack and the samples are dried in an oven that does not expose the screens to the direct flame.

In laboratories such as that of the Magnolia Petroleum Co., at Oklahoma City, where the examination of samples in Oklahoma is centralized, the work requires the drying of an exceptionally large number of samples daily. For this, six sets of containers are used and a large enough oven is provided to accommodate all the containers at once. Drying takes more time than washing, especially when several cuts are made. About eight cuts can be made from the contents of one container.

In the major company laboratories, samples rinsed by hand are either dried in ovens or over gas burners. Oven temperatures are close to 300° F. while the samples are still wet. On drying the temperature rises quickly to about 750° F. Care must be taken to prevent the samples from burning. Oxidization blackens shales and limestones and turns sands red. Boiling causes disintegration of very soft cuttings if carried on for any length of time. To eliminate boiling of samples dried over a burner, a number of laboratories have found it advisable to slant the top surface of the cuttings from a point near the lip of the cup to the bottom. At this angle water drains to an open space at the bottom of the cup where it boils away freely. Thorough drying is necessary because the samples are placed in gum lapped envelopes which crack and break after absorbing moisture. Moisture also defaces data marked on the label.

After drying, the samples are cooled on a rack by an electric fan because these paper sacks become easily charred or brittle allowing the samples to leak out when handled.

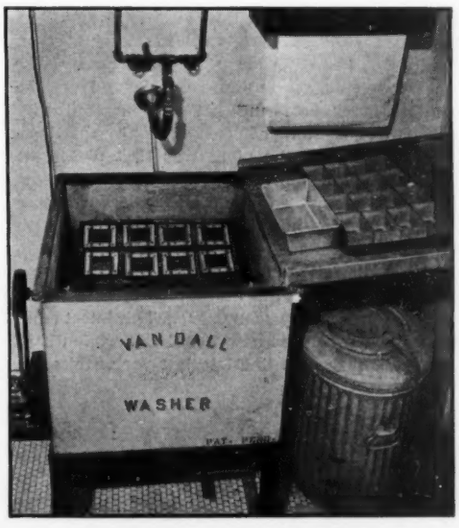
At the Ardmore cooperative laboratory, the laboratory man, Frank King, dries samples over burners set in short nipples of 5¾-inch casing, perforated on opposite sides with two holes of about an inch in diameter.

In the Transwestern Oil Co. laboratory in Oklahoma City, the drying oven is insulated with 1½ inches of rock wool.

Good ventilation of a sample washing laboratory is important where samples are dried over an open flame.

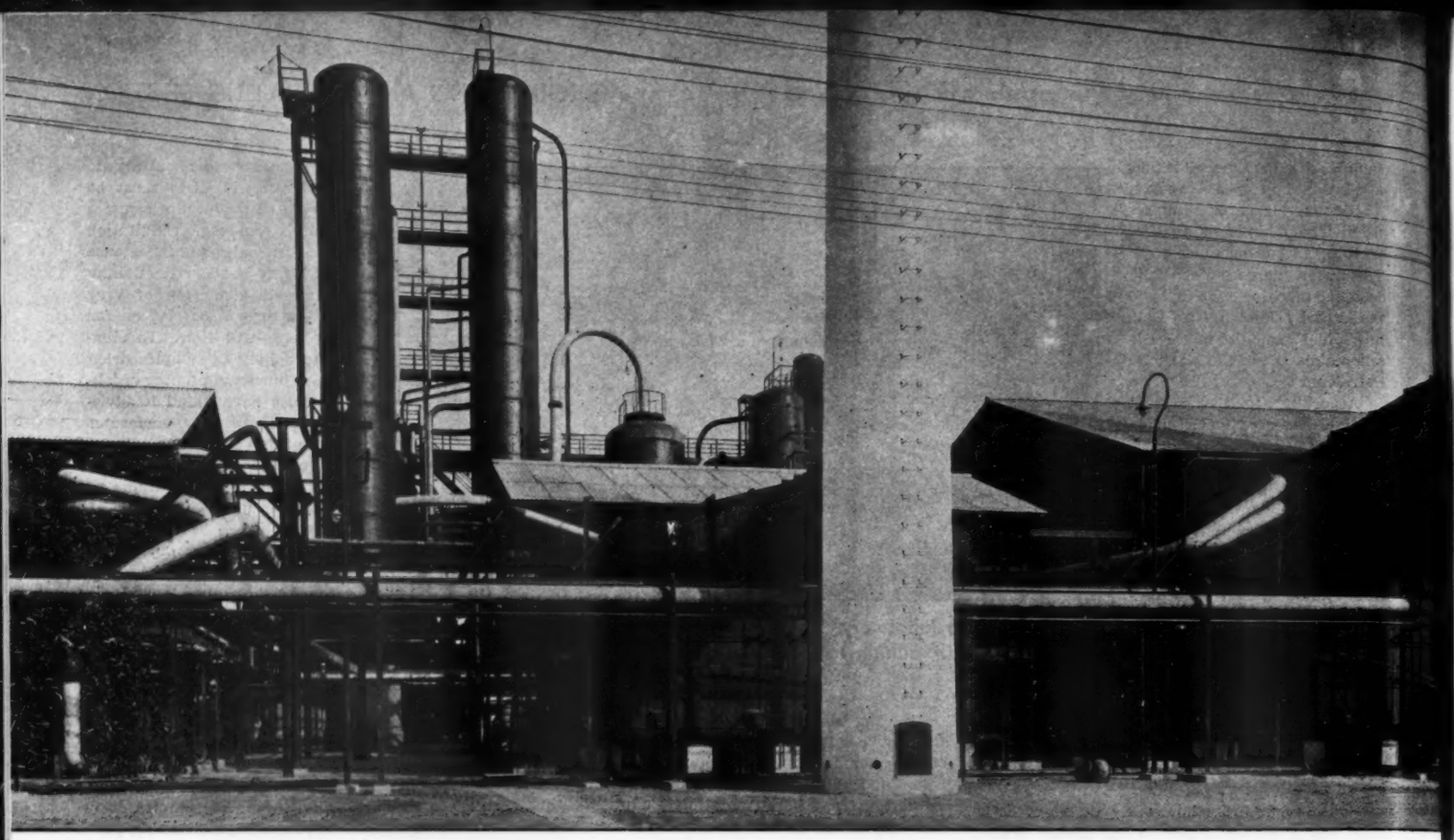
The whole operation of rinsing, drying and cooling of one set of samples usually takes about an hour. Days when 100 to 150 samples are handled through a laboratory are not considered uncommon. In times of emergency as many as 300 samples a day have been handled. The amount of detail work involved in making 16 to 19 cuts per sample is considerable and calls for the liberal use of rubber stamps.

In closing it may be remarked that during the period covering about a decade during which sample washing has become an essential part of geological department routine and during which the handling of samples through the checks has come to be regarded as a necessity, the work done stands as another example of cooperative effort.



Mechanical sample washer

[1] "Logging Rotary Wells From Drill Cuttings," by Stuart K. Clark, Jas. I. Daniels and J. T. Richards, *Bull. Amer. Assoc. Petrol. Geol.*, Vol. 8, No. 1 (January 1928), p. 59.



New 15,000-bbl. combination unit of the Pure Oil Co. at Smiths Bluff, Texas, showing the furnaces in the foreground. Left to right are: the combination crude and viscosity-breaker furnace, the reformer furnace and the clean oil cracking furnace. The high-pressure tower and crude flash tower are visible behind, and the evaporator and fuel oil flash tower with stabilizer in the background appear to the right

Pure Oil Using Three Furnaces on New Combination Unit

By GEORGE WEBER

As a part of its current widespread modernization program, the Pure Oil Co. recently placed on stream a new combination crude distillation and cracking unit at the Smiths Bluff, Tex., refinery. The new plant, capable of processing 15,000 bbls. of crude per day, comprises the latest developments in the cracking and distillation arts. Constructed in less than four months by the Lummus Co. under license issued by the Gasoline Products Co., the plant was first placed on stream March 24, 1937.

A preliminary 32-day run and subsequent continuous operation has shown very satisfactory results, and although the routine of regular operations has not yet been completely fixed, the capable performance of the new unit under variable conditions has clearly been proven. This latest addition together with the new 10,000-bbl. crude distillation unit placed in line late last year ranks the Pure refinery among the most modern in the Gulf Coast area.

The unit combines crude distillation with three coil selective cracking. A naphtha-kerosene cut is reformed, clean oil is cracked and the heavy reduced crude is converted into lighter material by viscosity breaking.

Three furnaces, a crude flash tower, a high-pressure bubble tower, a fuel oil flash tower, an evaporator tower and a stabilizer constitute the principal units of the plant. Design of the furnaces features the newest developments of the industry. Of Lummus type, they give maximum flexibility through separate firing of the various selective streams. The furnaces are elevated about 2 feet from the ground lending easy accessibility to the vertical burners installed in the furnace floors.

Flow Through Unit

The combination crude and viscosity-breaker furnace is constructed in three units. The crude stream is handled in a double pass system, through the convection section in the roof of the furnace, thence through the wall tubes of the radiant heating bank, leaving the furnace at about 720° F. The heavy viscosity-breaker stock is preheated in the roof convection section common with the crude stream, and is further heated in a separately fired chamber. From this second section, the heavy stock passes to the third combustion chamber of the furnace. It leaves this soaking section at a temperature of approximately 870° F. The stream is handled single pass throughout.

Double pass is used throughout the clean oil cracking furnace stream. From the conventional roof convection section, this cracking charge passes in two streams through the heating sections, where each pass is heated in a separate chamber. The soaking sections of the furnace are designed in the same manner, allowing for selective heating of each stream. Fire walls divide the heating and soaking sections each into two parts, cutting the clean oil furnace into four distinct firing units. The cracked stream from the soaking banks averages 970° F.

The reformer furnace carries out the same general design as shown in the other units. The stock is charged in a single pass through the convection section, heating and soaking sections, emerging at a temperature of about 940° F.

All distillation equipment in the new plant is of the conventional design used in combination units. The modern trend in pump housing is illustrated by the open-sided building in which are installed three Worthington hot-oil pumping units. Each pump is powered by a 500-hp. natural gas engine. Two handle the split streams of the light or clean oil cracking charge, and the third charges the viscosity-breaker furnace. A fourth hot-oil pump, steam engine driven, moves the reformer furnace charge. The smaller centrifugal pumps together with their steam standby units handling

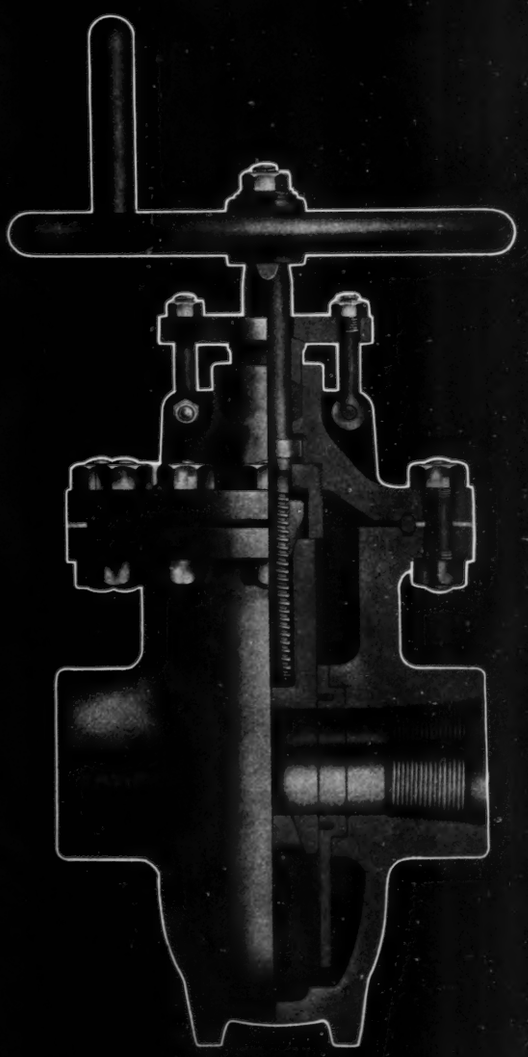
THE PRIDE OF THE ROAD IN 1914

WOULD BE LOST IN THE RUSH TODAY!

It's that way with GATE VALVES, *too*

Modern Gate Valve design today has pushed old style valves in the background just as progress in automotive engineering has made obsolete the "stem-winders" of an age that's gone. The W-K-M Through-Conduit Lubricated Gate Valve is recognized the oil world over as the very peak in gate valve achievements. Men whose opinions rank high in the field call it the best. They not only specify it, they demand it! So many are the exclusive advantages offered in this revolutionary valve that it is solving 95% of all gate valve troubles.

WRITE FOR BULLETIN NO. 641



It's different!

COSTS NO MORE THAN ORDINARY VALVES

Sold Through Supply Stores Everywhere

W-K-M Company, Inc.

OIL FIELD, PIPE-LINE & INDUSTRIAL EQUIPMENT

HOUSTON, Texas, U. S. A.

Export Office: 74 Trinity Place, New York

Cable Address: "WILKOMAC"

the other streams are grouped below the control room. They are provided with overhead protection, but the sides are open as in the hot-oil pump house.

Van Zandt Crude Charged

Crude from the Van Zandt field of East Texas will be charged primarily to the new unit. The principal products are gasoline and fuel oil. While the unit is operating at present for these two products only, the design allows for withdrawal of naphtha, kerosene and virgin gas oil cuts also. Under present operations, the yield from Van crude is approximately as follows: Gas, 8 per cent; gasoline, 59 per cent, and fuel oil, 33 per cent.

Four cuts may be made from the crude in the primary distillation step. The crude flash tower is designed for taking an overhead cut of straight-run gasoline, and side cuts of reforming stock, kerosene and virgin gas oil. Under present operation, the kerosene cut is omitted. The reforming stock which approximates a light kerosene is withdrawn stripped and charged directly to the reformer furnace. The cracked stock from the soaking section is then charged to the evaporator. Virgin gas oil is withdrawn and fed to the high-pressure tower.

The characterization factor of the heavy ends of virgin kerosene, with an endpoint range of approximately 450-525° F., is so similar to heavier cuts from the crude such as gas oil with a 550-675° F. endpoint range, that in designing the unit, it was not considered necessary to separate the clean oil cracking into two cuts. Therefore most of the cracking is done in the large clean oil heater.

Importance of Flashing

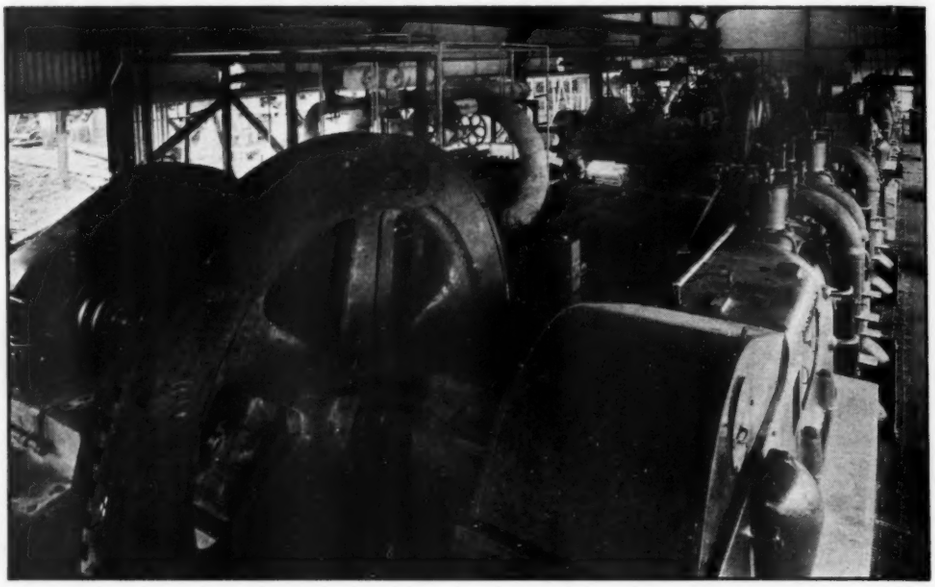
The adiabatic flashing of evaporator bottoms from 210 pounds to 5 pounds in the fuel oil flash tower, vaporizes the desired amount of that material. This step serves a two-fold purpose. First, since equilibrium is established in the evaporator tower at 210 pounds, further flash is necessary to bring the fuel oil yield to a desired minimum. Also, the flash from 210 pounds to 5 pounds vaporizes enough material to the drawoff tray in the fuel oil flash tower for recycling to the viscosity-breaker stage of the process.

Since the pressure on the evaporator tower is held constant, the temperature maintained at the top of the tower automatically fixes the amount and character of the feed to the high-pressure tower, and therefore affects the clean oil cracking charge, which is withdrawn from the bottom of that vessel. This control of temperature on the evaporator tower is of prime importance.

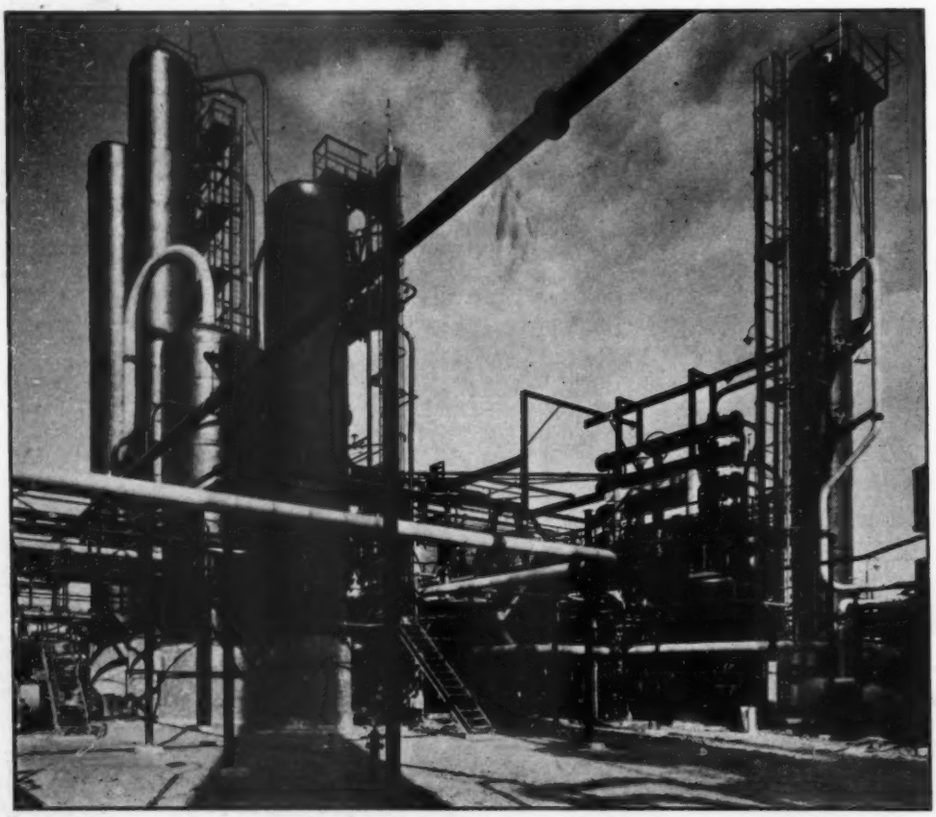
A certain amount of material which is lighter than that desirable for viscosity breaking is flashed off with the viscosity-breaker recycle stock in the fuel oil flash tower. This is considered as flash distillate and comes over as vapor from the fuel oil flash tower.

By pump-back reflux, the temperature at the top of the fuel oil flash tower is controlled, governing the endpoint of the flash distillate and conversely the amount of light material which goes into the viscosity-breaker unit. Surplus distillate is returned to the high-pressure tower.

The theory has been advanced that optimum operating conditions in the unit will obtain when the endpoint of the flash distillate equals the endpoint of the clean charge to the cracking coils.



Three hot-oil pumps powered by gas engines handle the streams feeding the viscosity-breaker and clean oil cracking furnaces, the picture being taken during the installation



Space conservation is featured in the fractionation section of the new unit. Transfer pumps, condenser boxes and heat exchangers are grouped about the towers, with the control room located on the second floor of a brick building in the background

Increased Heat Economy

Considerable heat economy is possible in this modern combination unit. Since high temperatures are required in various steps of the combination process, a large amount of heat input is naturally necessary. However, by means of preheating furnace charges to attain high temperatures, and utilizing the available heat by efficient heat transfer within the unit, a marked fuel saving is effected.

In the new Pure unit, hot-oil recirculation is used throughout. Virgin streams are available at high temperatures, requiring a minimum of further heating for cracking, viscosity breaking and reforming stages of the process.

The crude charge is preheated to a temperature of 660-680° F. by exchange with high-pressure tower reflux, virgin gas oil, and recirculation from the high-pressure tower bottoms. Three steam generators in the plant utilize the heat in the reduced crude and the high-pressure overhead and bottom streams. The mixed straightrun and reformed gasolines from the high-pressure separator take heat from the stabilizer bottoms before charging to that tower. Additional heat is supplied the base of the stabilizer by a high-pressure tower circulating stream.

By maintaining a pressure of 200 pounds on the high-pressure tower, the gas from the high-pressure separator contains no material valuable as gasoline. This pressure also tends to maintain a

(Continued on Page 72)

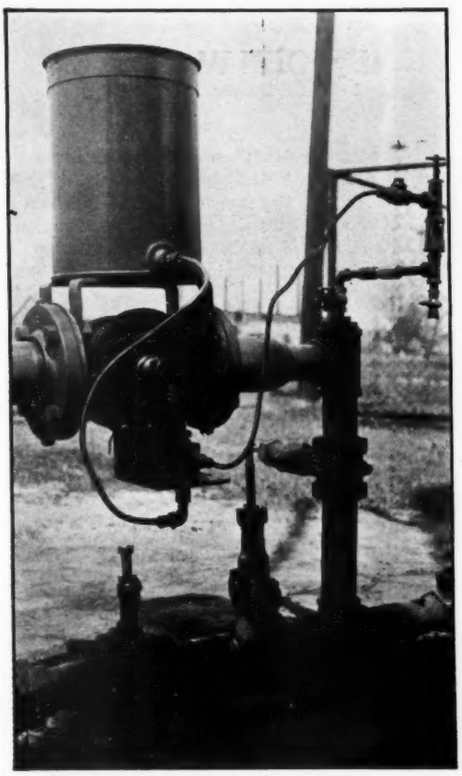
OPERATING IDEAS

Lubricating Oil Drum Rack

The detailed construction of the drum rack may be seen in the picture. Special note should be made of the point at which the lubricating oil drums turn on the frame.

Automatic Lubricator

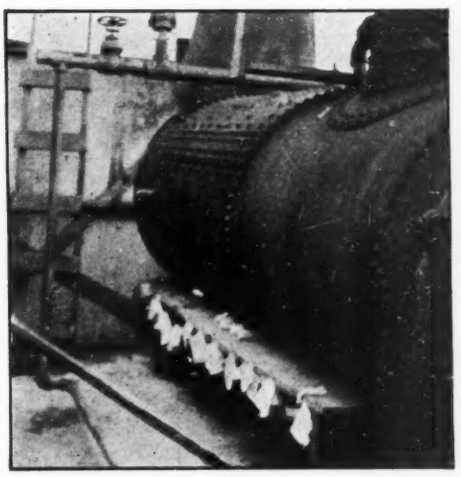
In a Kansas field the chemical proportioning device shown here is used. It has been assembled in the field and essentially includes the chemical tank, a "motor," piston pump and fittings. The "motor" contains a paddle wheel with the shaft set at right angles to the oil flow from the well. The shaft is mounted a little off-center and the cross section of the flow area at the meter is greater than at any other point in the line so that the oil strikes only the paddles on the lower side of the wheel. As the oil flows from the well and through the motor it drives the paddle wheel, causing the shaft to rotate. Mounted on the end of the shaft is a small cam or wheel that is mounted slightly off center with respect to the shaft. Pressing against this cam is an arm, into the end of which has been mounted a roller bearing. This bearing impinges against the cam and as the cam rotates off-center the arm moves upward and down.



The latter is held tightly against the cam by a spring. The advantage of the assembly is that it ceases to supply chemicals at any time the oil flow ceases and the quantity of chemicals added is directly proportional to the oil flow at all times. For convenience in judging the effectiveness of the lubricator the company using the one shown in the picture has mounted a sight glass in the chemical supply line just before the chemical enters the oil line.

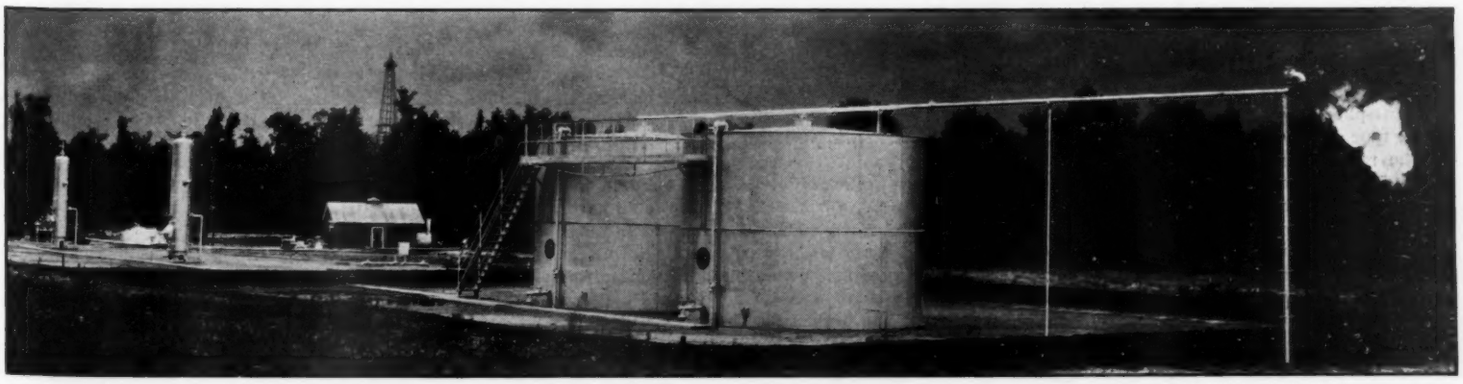
Expedite Sample Handling

When samples are caught from the base of the surface pipe on down, the sample-man must expedite their handling. To properly dry the cuts during rainy weather is an aggravating problem. The accompanying picture shows how it is done by one drilling company. The company constructed benches, one edge of which is flush with the side of the boiler, and nails to hold the labeled sacks are driven into the outside edge of the bench. Samples are then dumped in sequence upon the boards and the corresponding sack hung on the nail opposite the cut. With similar benches at each side of three boilers, as many as 100 cuts representing 1,000 feet of cuttings may be dried at one time. At the end of three hours the samples are dry enough to sack. Once the cycle begins to function, seldom more than two boards are in use.



Separator and Tank Battery Assembly for Gas-Distillate Well

To handle the output of a large gas-distillate producer in the Cotton Valley field of Louisiana, one operator installed the separator and tank battery assembly shown here. An automatic vent is placed in the overhead line which is led off about 75 feet from the distillate storage. By adjusting the point at which the vent will open, pressure in the tank can be regulated. A ladder, shown on the right at the end of the vent line, was made by welding old sucker-rods to the tubing brace, thus allowing the leaseman to easily reach the automatic vent.



Fundamental Mechanism of Solvent Oil Refining

By JOHN W. POOLE
Petroleum Chemist, New York City

In commercial refining operations there need be considered only a small fraction of the phase diagram of the two basic constituents. In fact, for any specific stage of an extraction plant only the composition of those two phases which coexist in that stage can have direct bearing. Such compositions,—if "T" is regarded as the temperature of that stage—would be represented by points "a' " and "a" in Figure 1 (pg. 59, issue May 6, 1937), which show the exact distribution of the two components at this temperature.

However, even the simplest commercial problem involves the separation of two substances by means of a system brought into being by a third substance (solvent). In consequence there must be present in every stage more than two substances. In our discussion of two component systems we have indicated no actual refining steps; that which has been shown represents only a mechanism or vehicle by means of which it may be possible to refine such substances as petroleum fractions: Solvent refining methods utilize two phase systems by imposing such conditions on these systems that the two separate phases will behave like two separate receptacles. If the system at hand is a suitable one, each phase may be said to possess peculiar powers to hold within itself one class of material, while the other phase will possess a similar power to collect and retain a different type of material. If originally these two types of material are mutually dissolved each in the other to form, for example, a raw material such as lubricating stock, a means of separating these substances thus becomes available. A raw stock rich in compounds suitable for premium lubricating oil very frequently is contaminated by substances which are unstable, likely to form sludge, deposit carbon and/or be otherwise objectionable. Such raw stocks can be separated into the "good" and "bad" constituents by introducing them into a two-phase system, of the type already shown. The raw material will be subjected to the preferential action of each phase to gather to itself one of the two types of material.

In extractive refining for the production of superior lubricants, the "solvent" phase tends to collect and retain the undesirable portions but to reject those substances which are suitable constituents of fine lubricants. Similarly the other phase commonly referred to as the "oil" or "raffinate" phase tends to reject these undesirable substances but to retain the desirable or "paraffinic" substances. In practice these desirable substances, which for simplicity we are momentarily regarding as a single substance, form the major part of the second phase. Referring to Figure 1, "A" may be regarded as "solvent" and "B" and the "paraffinic" or desirable constituents of lubricating oil, the two containers into which the two types of substance can be forced to go.

This is third of a series of articles prepared by the author on "Theories and Practices of Solvent Oil Refining." The first appeared May 6, page 59 and the second July 8, page 40.

For concrete illustration, we will assume that in the stage in question there are present at all times 90 parts of "good" oil, 10 parts of undesirable oil (a total of 100 parts of hydrocarbon material) and 200 parts of selected solvent. Suppose also that the phase diagram is that shown in Figure 1, A and B representing the substances indicated in the last paragraph, the temperature being T so that "a' " and "a" represent the respective phase compositions.

For a complete analysis of phase conditions the active participation of the undesirable material in determining phase conditions should not be disregarded. Nevertheless, for our present purposes we will momentarily disregard its influence. As a matter of fact under the conditions of high dilution outlined above, the effect of this third constituent will prove to be decidedly secondary.

To determine phase composition and quantities we find that "a' " calls for a phase consisting of approximately 90 per cent solvent and 10 per cent "good oil" and that "a" calls for a phase comprising 20 per cent solvent and 80 per cent "good oil," which we have noted would be referred to respectively as the "solvent phase" and the "oil phase." For the time being the presence of the 10 parts of undesirable material will be neglected except to assume that it will not sensibly alter the mutual solubility effects of the two main components.

Utilizing the method of computation set forth in a previous article we find that the solvent phase will comprise about 183 parts of solvent and 20 parts of good oil. The oil phase will contain about 70 parts of oil and 17 of solvent. The writer wishes to again draw attention to the fact that in addition to knowing the amount of "A" and "B" in the system, algebra is necessary to determine the respective quantities. 200 parts of "A" to 90 parts "B" indicate an abscissa of 69 per cent "A" and 31 per cent "B," since this crosses Temperature T at a point within the two phase region, the phase diagram can only indicate the relative composition of the two phases but not their amounts. To those highly experienced in the use of these diagrams this fact will doubtless appear to be very elementary. However, unless one is so experienced, the point would seem to be far from obvious.

Let us now reconsider the disposition of that material we have classed as "undesirables." Actually all ten parts will not merge with the solvent phase. They will be distributed between the phases in a definite ratio, the magnitude of which appears to be influenced by temperature and little else. If the temperature is made greater than T a greater proportionate part of these substances are likely to join the "solvent phase"; if the temperature is depressed a portion is likely to be driven from the solvent phase back into the "oil phase." Offhand it might appear — and is frequently assumed — that this phenomenon of increased "solution" in the solvent phase with increased temperature, is merely a manifestation of "solubility" increasing with temperature. In the sense usually attributed to "solubility" this is scarcely accurate. The phenomenon may still be observed, if by themselves solvent and these undesirables, are found to be completely miscible in all proportions.

Distribution ratio is defined in this instance as the quantity of "undesirables" dissolved in a specific volume of solvent divided by the quantity of

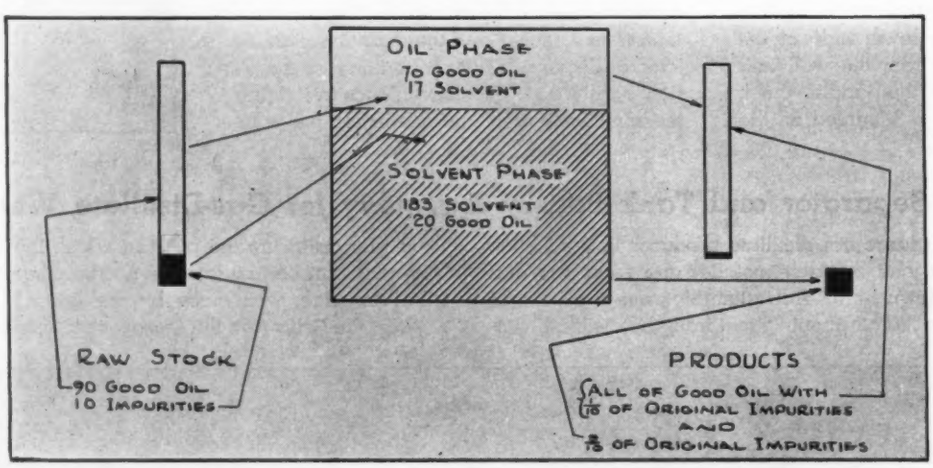
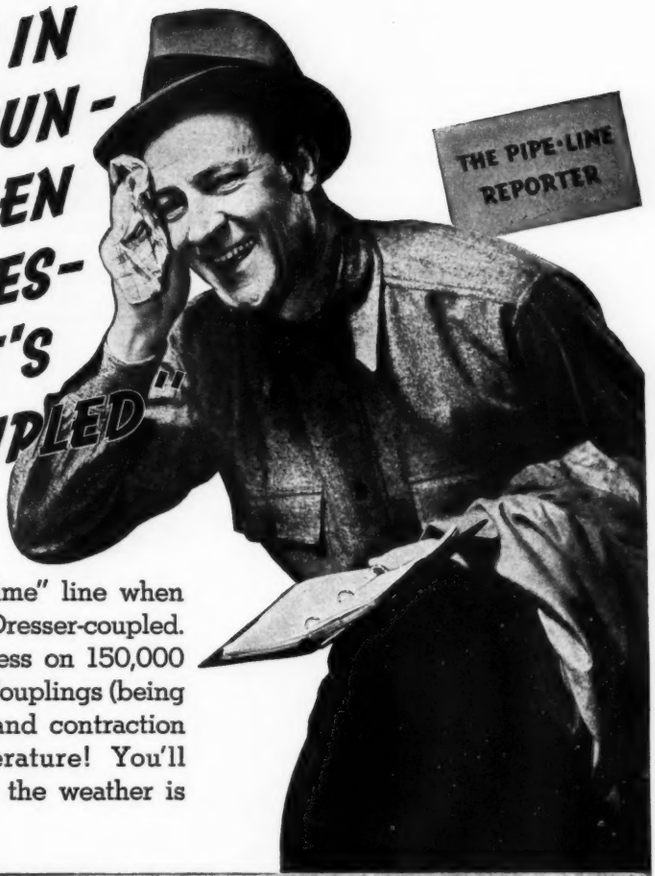


Fig. 2—Diagram illustrating method of analyzing two-component systems

"THEY JOIN IT IN THE BOILING SUN - FORGET IT WHEN WINTER COMES - BECAUSE IT'S DRESSER-COUPLED"



What will happen to your "summer-time" line when cold weather hits it? *Nothing*—if it's Dresser-coupled. Nearly 50 years of permanent tightness on 150,000 miles of pipe . . . *proves* that Dresser Couplings (being flexible) take care of all expansion and contraction despite unusual extremes of temperature! You'll appreciate this flexibility most when the weather is coldest—and your load is heaviest.

Note to Reader: This is the tenth in a series of advertisements dramatizing one engineer's experience with his first Dresser-coupled line. For the complete story, write for Bulletin No. 351.

S. R. DRESSER
MANUFACTURING CO., BRADFORD, PA.
In Canada: Dresser Mfg. Company, Ltd., 60 Front Street, West, Toronto, Ont.

the same material dissolved in a similar volume of that hydrocarbon material, which is the principle constituent of the oil phase.

The above definition of distribution ratio is not the only definition possible. It is, however, entirely proper. For practical purposes it seems the most convenient; it eliminates the necessity of considering changes of those portions of A and B which are apart from their main phase.

It is not easy to give an adequate answer to the question—"What is a typical distribution ratio?" Not only are significant data scarce but it is often practically impossible to define what constitutes the undesirable substance. In the simplest case the number of compounds in the "undesirable substance" in a petroleum fraction is extremely large. For each compound the degree of undesirability is different. At some point the difference between a "desirable" component of the finished lubricant and an "undesirable" component thereof, is perforce so small as to be lacking in practical significance. We do know that distribution ratios tend to increase as substances become less desirable as constituents of lubricants; the criterion of desirability being high A.P.I. gravity, high stability, low carbon and resistance to change of viscosity with change of temperature.

Due to this extremely complex situation, the value of research directed toward the determination of distribution ratios is debatable. Personally the writer doubts if such research is worth the efforts involved, and believes our present knowledge of tendencies will serve about as well as more exact information. Any accurate data must perforce apply only to specific conditions which at best are extremely limited in comparison to the size of the field. We do know that distribution ratio is the factor which determines such matters as the most favorable solvent ratio and the number of stages but direct empirical determination of these two items is about as easy to obtain as are the data necessary to calculate them. It is general practice and probably always must be general practice to determine proper operating conditions by small scale experimentation before starting plant operation on a new stock. To be sure, the records of past work sometimes are useful. If an "old" stock and a "new" stock appear similar, and the same products are desired in both cases, the stock may behave similarly when processed. However, preliminary small-scale processing of a new oil can never be safely omitted.

At the same time, some conception of the magnitude of distribution ratios may not be entirely pointless in assisting visualization of processing The author has seen data indicating that a value of 10 or more may exist for heavier-than-water-substances present in 150 vis/210 "overhead" East Texas cylinder stock, but that values of less than unity probably exist for materials which must be removed to increase the viscosity index of such stock to a value of 100. That which determines the solvent ratio and number of plant stages is, however, little related to the distribution ratio of the most easily removed substances, since their removal is practically assured by the removal of those portions most difficult to remove, i.e., substance of low distribution ratio. At one time the author was inclined to attach significance to an "average ratio." However, he has more lately found that any practical significance appears to lie in the ratio possessed by that portion of the undesirable fractions which just barely fail to be good enough for inclusion in the final raffinate. In spite of the fact that no solvent, used commercially, would appear to ever be used with stocks failing to contain substances of high distribution ratio, a computation based on the number of stages, the quantity of extract produced and the quantity of solvent used usually indicates a distribution ratio of less than unity and not infrequently equal to as little as 0.1.

The above values of distribution ratio, or any other values are valid only in light of decisions made as to what constitutes "raffinate" and "extract" material, and on the estimated analysis of materials practically impossible of analysis. More or less arbitrary conclusions or assumptions will always be necessary, except for calculations for easily analysable substances not naturally occurring and which in consequence have somewhat doubtful connection with practical conditions. This is one reason why very little may be expected of distribution ratio, other than as an aid to visualization of the mechanisms involved.

In light of the above discussion let us return to the 10 parts of "undesirables" which were left dissolved in the solvent phase of our example. It has become obvious that this material may not be entirely held within that phase. For simplicity let us make the very questionable assumption that we know what we mean by "undesirables" and will assume a distribution ratio of 4, which in view of our definition means that each volume of solvent in the solvent phase will be associated with 4 times as much of these impurities as will a volume of good oil in the other phase. In the former phase there are 183 parts of solvent; in the latter phase 70 parts of good oil. Therefore, by a material balance, allowing "x" to equal the concentration in the latter phase we have 183.4x plus 70x equals the original 10 parts or 802x = 10 parts.

Since the respective phases contain 732x and

• WILLIAMS' "Vulcan Superior" is a universal service tong for *both* pipe and fittings—handles either without a change of parts. The "V" recess in the jaw assures quick and positive grip on fittings. Add to this feature *reversible jaws* that mean twice the wear—double the life—and you'll readily realize that "Vulcan Superior" is a *real extra* value tool. Get this husky helper working for you now. It's fully guaranteed.

J. H. WILLIAMS & CO.
75 Spring St., New York

Headquarters for: Drop-Forged Wrenches (Carbon and Alloy), Detachable Socket Wrenches, "C" Clamps, Lathe Dogs, Tool Holders, Eye Bolts, Hoist Hooks, Thumb Nuts and Screws, "Vulcan" Chain Pipe Tongs and Vises, etc.

70x respectively we find that a little more than nine-tenths of the impurities are concentrated within the solvent phase.

Let us now consider what would happen if we were to introduce into this stage a further quantity hydrocarbon material, but in such small amount that its quantity is insignificant compared to entire quantity of materials present. It has the same composition as before: 90 parts of "good" oil to 10 parts of "bad" oil. The 90 parts of good oil cannot enter the solvent phase, since that phase is already saturated with "good" oil, it must perforce join with, become part of and augment the oil phase. The 10 parts of undesirables will separate according to the distribution ratio of 4, again 9 parts will enter the solvent phase and 1 part will enter the oil phase along with the 90 parts of good oil, which even if still incompletely refined, is thus very much improved over its original condition.

The above illustration of the workings of the solvent refining mechanism, is valid, but not quite complete for commercial practice. The assumption was made that the newly added material was so small in quantity that its effect on composition would be nil. In practice means must be provided for the admission of compensating quantities of solvent simultaneously with admission of oil, the result being that other minor changes in distribution will occur.

Use of Diagram

In Figure 2, shown herewith, the essence of the preceding discussion is shown diagramatically.

The column at the left is representative of a given volume of raw oil; the white portion, equal to 90 per cent the total, portraying that portion which is highly desirable as a lubricant. The black portion represents the 10 per cent of naturally occurring impurities.

In the large square in the two-phase system, the oil phase is shown on top with the larger solvent phase beneath. The relative areas represent the approximate relative volumes as determined by our preceding calculations.

The material is shown as being charged at the interface, from whence the fractions travel in the manner already described: all of the "good" oil into the oil phase, one part out of ten of the undesirables entering with it; the remaining nine out of ten parts of undesirables entering the solvent phase. This being accomplished, actual fractionation of the original stock has been effected.

The composition of the respective fractions is depicted at the right: All the original good oil in one fraction with only 1/10 of the original impurities remaining; 9/10 of these impurities have been separately recovered as shown.

It is again stressed that this diagram takes into account only the results obtainable by charging a comparatively minute quantity of oil and subjecting it to the fundamental mechanism. The complete action of the two phase system as commercially applied will be covered in the next paper. The purpose of the preceding is solely to assist readers in visualization of the workings of the process. It does not portray commercial use.

Analyses of Michigan Crude Oils

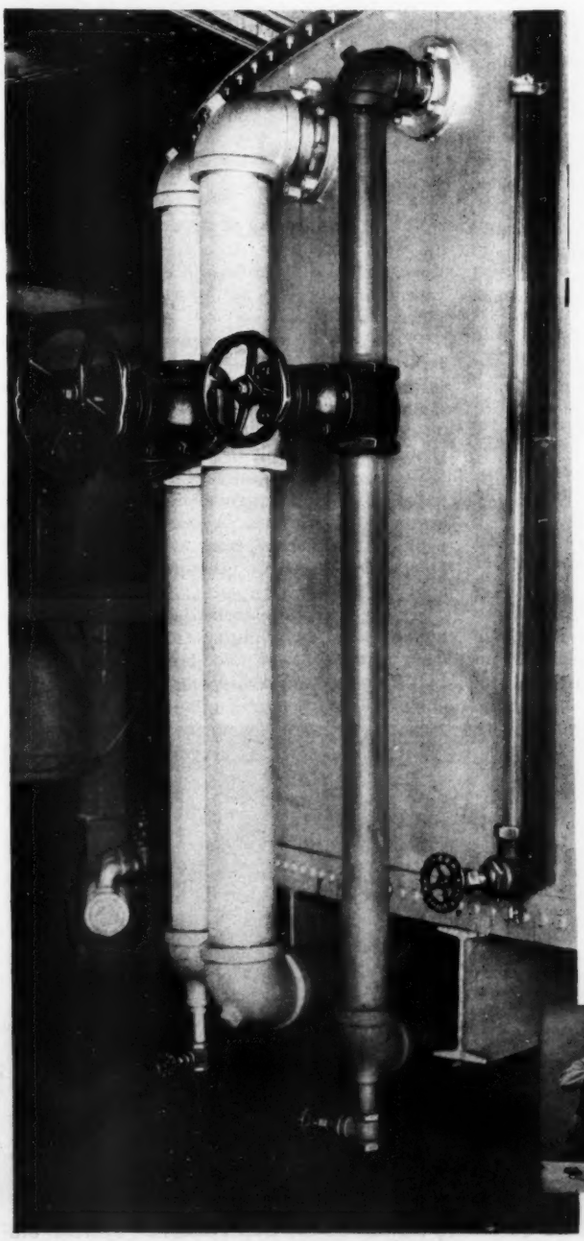
The growing importance of Michigan as an oil-producing state has prompted the U. S. Bureau of Mines to extend its study of the general characteristics of crude oils to include representative samples from 13 fields in 8 counties in the lower peninsula. The resulting report indicates that the oils are predominantly paraffin-intermediate-base, wax-bearing crudes, yielding 25 to 35 per cent of highly paraffinic gasoline and about the same amount of kerosene and gas-oil combined, 12 to 15 per cent of lubricating oil stock, and 20 per cent of residuum with a carbon residue of about 6 to 7 per cent. There appears, also, to be some correlation which has been portrayed graphically, between certain properties of the crude oils and both the geographical location and geological structure of the oil-producing areas within the state. The producing horizons from which the samples were obtained are represented by the Berea sandstone, Upper Traverse and Traverse limestone, and the Dundee and Trenton limestone formations.

The samples from the Dundee limestone are similar to each other with certain exceptions. These differences appear in production from this formation outside of what usually is termed the Central Michigan area. The properties of certain crude oils produced within the area are much alike but show variations depending upon the distance of the producing pool from the center of the basin. The Traverse limestone samples show local variation but in general are not materially different from the Dundee production. The samples from the Muskegon and West Branch fields shown considerable variation from the other limestone production in a number of properties. The Berea sandstone crude oil is characterized by relatively high viscosity of the vacuum fractions.

The 15 samples of Michigan crude oils, for which individual detailed analyses are given, were collected during May and June, 1936, and therefore represent current production, and the analyses are on a comparable basis. The oldest well covered by the samples was completed during November, 1927, and six were from wells completed in 1936.

Copies of Report of Investigations 3346, "Analyses of Crude Oils From Some Fields of Michigan," by E. L. Garton, may be obtained without charge upon request to the Information Division, Bureau of Mines, Washington, D. C.

"Use Jenkins on Large Lines, too"—



Dollars-and-cents reasons why more and more concerns specify Jenkins for IRON as well as Bronze Valves

IN their own cost sheets valve users find evidence that it pays to buy IRON valves as carefully as bronze. Trouble with valves on large lines proves to be more expensive, as a rule, than on small lines. More time and labor is required to take down large valves. Parts and replacements cost more. Lengthy service interruptions may be necessary. Jenkins IRON Valves... *built for trouble-free performance* like the famous Jenkins Bronze Valves...are bound to produce economies.

When valve users check prices on IRON valves they often find that Jenkins quality can be obtained for much less than they had believed. Actually, a "Jenkins" sells at the standard price for good valves.

If you buy valves on a dollars-and-cents basis you will want to inspect the 24 important pictures in Jenkins' PHOTO-FACTS booklet. They show exactly why Jenkins IRON Valves save money in service...why hundreds of experienced buyers are specifying them along with Jenkins Bronze Valves. Write for a copy, or ask your supply house for it.

JENKINS BROS., 80 White St., New York; 510 Main St., Bridgeport, Conn.; 524 Atlantic Ave., Boston; 133 N. 7th St., Philadelphia; 822 Washington Boulevard, Chicago; JENKINS BROS., Ltd., Montreal, Can.; London, Eng.

JENKINS VALVES
BRONZE—IRON—STEEL

WRITE FOR THIS BOOKLET

Revamp East Texas Pipe Line to Gain Greater Efficiency

By MITCHELL TUCKER

Through the recent rearrangement of their East Texas gathering system, Sun Pipe Line Co. and Yount-Lee Pipe Line Co. (joint system) have effected substantial operating economies, and provided a system of greater efficiency. This was accomplished by the construction of a 55,000-bbl. receiving tank and relay field station in about the center of the field. This permits the lower portion of the gathering system to deliver direct to the initial main-line station at the south end of the field, while the system in the upper portion delivers into the 55,000-bbl. receiving tank for later movement by the relay station to the main-line plant during that portion of each 24 hours when the lower gathering stations are shut down.

Sun Pipe Line Co. and Yount-Lee Pipe Line Co.'s gathering system in the East Texas field may be considered in two parts: One the 8-inch welded lines north of the Sabine River, and the other the 10-inch welded lines south of the river. Smaller size feeder lines connect to all Sun properties and to those from which the Sun is purchasing oil, and the Stanolind Oil & Gas Co. leases formerly owned by Yount-Lee Oil Co.

Interior view of the new Thomas relay station on the banks of the Sabine River, East Texas field, consisting of a centrifugal pump direct-connected to a 250-hp. electric motor

Field Station Equipment

The field gathering stations are composed of high-pressure units, employing 5 by 10 duplex reciprocating pumps driven by 50-hp., 440-volt, 60-cycle G.E. electric motors. Some stations consist of one single unit while others are multiple-unit installations, depending upon the volumes to be handled from each. Fifteen such units are included in the system north of the river, and 23 south of the river.

Low-pressure field units are installed in a few places throughout the field where the advantage of gravity is not afforded, and it is necessary to boost crude to one of the high-pressure field stations. Such units consist of 4 by 6 duplex reciprocating pumps driven by 32-hp. gas or gasoline engines.

This continuous gathering system delivers oil into the four 80,000-bbl. tanks at Grissom station in the southern end of the field, where the initial main-line booster station is located on the 169-mile, 10-inch welded line to Sun City and Stanolind's terminal on the Gulf Coast. The Grissom station is a three-unit, electrically-driven centrifugal pump installation. Four intermediate main-line stations are employed between Grissom and Sun City, capable of handling capacity loads of about 51,000 bbls. daily. Discharge pressure at Grissom averages 850 pounds.

Prior to the recent rearrangement, all 38 of the high-pressure gathering units pumped simultaneously to the Grissom tank farm throughout each 24-hour period. Station and line pressures ranged from 450 to 700 pounds in the upper part of the field north of the river.

The newly constructed relay station is situated near the bank of the Sabine River on the Mose Thomas lease, about 26 miles north of the Grissom station. The Thomas relay station consists of a Goulds centrifugal pump direct connected to a 250-hp., 2,200-volt, 60-cycle G. E. electric motor, having a full-load speed of 3,570 r.p.m.

A typical two-unit, high-pressure field gathering station on the Sun-Yount-Lee system, employing 5 by 10 duplex reciprocating pumps driven by 50-hp. electric motors

Pumping Arrangement

Under the present arrangement, all gathering units north of the Thomas relay station are permitted to pump into the 55,000-bbl. receiving tank during the daylight hours, while the lines below the river are relieved of the volumes from above and can operate at substantially reduced pressures to Grissom. All production south of the river is moved out during the day while the relay station is shut down.

By taking 26 miles off the distance required of the northern stations, and enabling them to pump direct into the 55,000-bbl. tank instead of against the line into which the southern stations were also pumping, the line and station pressures have been reduced from 450 to 700 pounds down to 100 to 250 pounds. Correspondingly, the required pressures on the system below the river have been reduced.

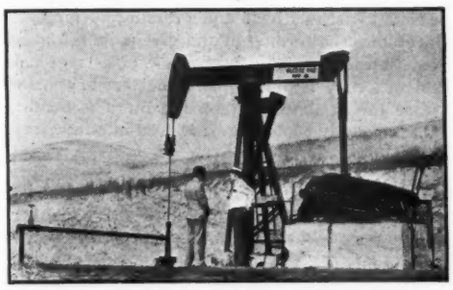
The relay station operates at night, usually from 6 p.m. to 6 a.m., while the units south of the river are shut down, and delivers oil from the 55,000-bbl. relay tank on the Mose Thomas farm into the 80,000-bbl. tanks at Grissom.

In summary, the advantages from the rearrangement of this vast gathering system may be listed as (1) The reduction in maintenance expense due to operating lines and field stations at lower pressures and shorter running periods; (2) extension of the economic life of both stations and lines is assured for the same reasons; (3) a reduction in electrical charges is made due to a better distribution of the demand load over each 24-hour period; (4) daylight operation is permitted at all points except the one relay station.

Shell Portable Rig Completes Four Wells in 38 Days

By T. P. SANDERS

The most noticeable trend in California drilling operations is the wide acceptance of portable rotary equipment. While its use has been successful in drilling to depths greater than 5,000 feet, its advantages are best brought out by shallower holes. Interest displayed in this type of equipment is being justified in an impressive manner in the Mount Poso field and other nearby fields of Kern County, California. Here the best record so far established was made recently when Shell Oil Co., one of the large operators of the field, drilled and completed four 1,800-foot producing wells with the same portable rig in 38 days. This time includes moving, drilling, running casing, waiting for cement to set, testing for water shut-off, coring, running Schlumberger tests, completing, and all other operations incident to drilling, except construction of derrick, cellar, and pits. Investigation has revealed that this record was not established at the expense of careful development, for not only were precautions taken to obtain faultless completions with sufficient information for intelligent future control, but also new practices were introduced to save future expense.



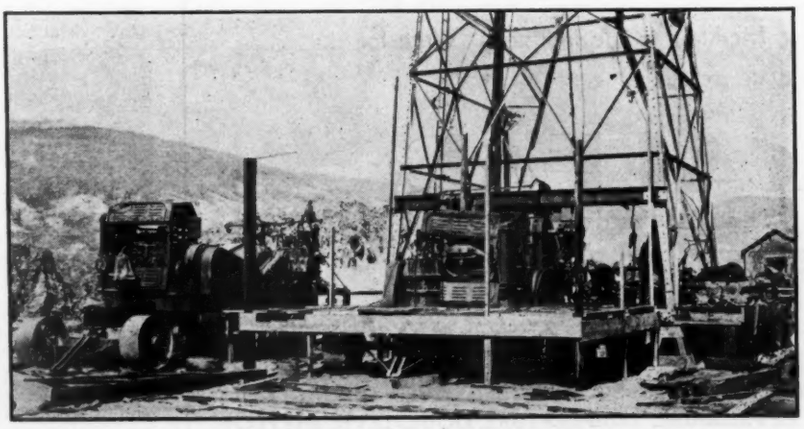
Foundations for pumping units in Mount Poso field are constructed before drilling starts

The Mount Poso field is located 14 miles north and somewhat east of Bakersfield in California's San Joaquin Valley. While the country to the west is flat, the field lies in the foothills of the Sierra Nevadas, and is characterized by rounded, treeless mountains. Many locations are made on almost inaccessible slopes requiring considerable excavation work. Roads to all Shell locations are laid out and constructed by the engineering department, so that the grades will not be too steep for the safe transporting of drilling equipment. This work, together with digging of pits and erecting the derrick, is done at each location before the drilling tools are available, thus saving idle time for the rigs and crews. At present several locations are ready for drilling. These will be developed as soon as tools are available. This practice is commonly followed in drilling programs of this kind, where all rigs are operated directly by the producing company. Practically all drilling in this area is done with portable equipment. Shell alone uses three, all of which are powered by internal combustion engines using either gasoline or butane for fuel. The rig used in the record drilling is divided into units which are mounted on broad steel wheels and caterpillar treads so that they can be drawn by trucks or tractors. They are blocked up on location to eliminate vibration. This rig has been in use for seven years; more recently designed porable rigs are usually mounted on skids so that the units can be loaded on trucks for moving.

Structurally the Mount Poso field is a monocline striking about N15°W with a westerly dip of approximately 5°. The oil is trapped against the curving Mount Poso fault. The productive area is about 4 miles long from north to south with a maximum width of about a mile. The depth to the top of the producing sand ranges from 1,500 to 1,800 feet.

The top productive zone is the Upper Vedder zone, averaging 75 feet in thickness and separated from the Lower Vedder zone by 75 feet of silt. The limit of production in depth is governed by an approximately horizontal water table. In cross section the Lower Vedder zone is wedge-shaped, with an original productive thickness of 200 feet at the apex of the structure and wedging out to the west where the water table meets the top of the Lower Vedder zone. The water table in the Upper Vedder zone was originally at the same level as in the Lower Vedder zone, and therefore, the Upper Vedder zone is productive farther down-dip than the Lower Vedder zone.

All the productive sands are Miocene and, except for some 600 feet of Pliocene strata at the top of the section, all of the drilling is through Miocene sediments. The section is made up of siltstone and sand with occasional pebbly streaks and hard shells.



Shell's portable drilling rig which completed four 1,800-foot wells in 38 days

Most wells require about 30 feet of surface casing, which is cemented by the drilling crews. The next string is cemented on top of the Upper Vedder sand. Before this is done it is common practice at present to drill almost to the top of the productive strata and make a Schlumberger electrical log. From this log the depth at which the top of the Upper Vedder zone should occur is closely determined and the 8⅝-inch water string cemented a few feet above this point. The water shut-off test is usually performed here in the same way that a formation test is made, except that the annular space outside the drill pipe is packed off in the casing shoe instead of at the top of a rat hole. The test is witnessed by a representative of the California Division of Oil and Gas.

One of the drilling crews on the Shell rig which established record drilling time

In drilling the pay horizons oil is circulated in place of mud. Great care is taken in selecting the completion depth because of the proximity of bottom water. Perforated 6⅝-inch liners are installed in the oil measures.

The most outstanding development in pumping practice in this field is that the Shell company has recently inaugurated the practice of constructing the foundation for the pumping unit at each well before the well is drilled. So careful has been the planning for development of this area that it is believed all concrete work required at the well site during the entire life of the well is now being done before the drilling rig arrives at the location. At the time the concrete work is done on the cellar preparatory to drilling, the pumping unit's foundation is laid out and poured. A concrete platform around the well is also poured. This is made large enough so that the well-servicing unit is able to park on it while doing rod and tubing work, thus keeping unit, men and tools out of the mud in wet weather. Steel substructures have been used under the drilling derricks on later wells,

since concrete corners tend to be in the way during well-servicing operations. A portable mast is used for all well servicing, which permits removal of the drilling derricks as they are needed elsewhere.

This practice, of course, necessitates early selection of the surface pumping equipment, but the practice cannot be considered a disadvantage in this field, since the wells are immediately put to pumping upon completion, and subsurface conditions are sufficiently understood so that the proper equipment can be selected. The possibility that a desire may arise to change the type of prime mover on the unit has been considered with the result that foundation bolts have been provided both for multi-cylinder engines, which can be operated on gasoline, natural gas, or butane, and for electric motors. While providing foundations for two types of power creates an additional expenditure, this is small in comparison with the expense of moving in cement-mixing equipment later in the life of the well for doing foundation work.

View of the Mount Poso field of the San Joaquin Valley, California

The fluid pumped from most Mount Poso wells depends, within limits, upon the capacity of the pumping equipment, but large capacity pumps are not especially desirable because of the danger of bringing up bottom water. The four wells completed in record time had an average initial production of 335 bbls. per day, but would have produced more with larger pumps. The older wells of the field have often produced enough water to necessitate a plug-back job.

Unusual Plug-Back Practice

A type of plug-back job which has met with considerable success in this area recently is the practice of shooting slurry into the face of the water-bearing formation with explosives. A patented cementing bomb which contains a charge of explosive at both ends is filled with thick cement slurry and lowered to bottom where it is detonated. Since the lower charge is a higher-speed explosive, it tends to form a cavity in the hole, thereby cleaning the walls to form a closer bond between cement and formation. The slower shot on top of the cement generates heat and pressure to force the slurry into the formation and give it its initial set. Sometimes, especially in the case of a large hole, cement slurry is placed in the bottom of the well before the cementing bomb is run. The bomb is then filled with cement and lowered into this slurry before detonation.

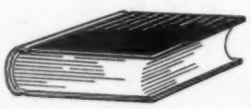
Locations Available

Many locations remain to be drilled in the Mount Poso field and other nearby productive areas. Since waste time has been practically eliminated, it is likely that Shell's drilling record will be bettered, perhaps by the same crews. A driller on one of these crews was overheard saying to Eli Pederson, drilling superintendent, "Gosh, Eli, I don't like to spend more than a week on a well."

South American Handbook

The South American Handbook, of which the fourteenth edition recently appeared, is a comprehensive, compact, and thoroughly up-to-date annual compendium of general information about Latin America. Its 600 pages are packed with information about the governments, constitution, agricultural and mineral resources, coinage, transport, postal and other services of the 22 republics stretching from Mexico to Tierra del Fuego. Each republic is dealt with individually, but there are systematic summaries of the air, railway, steamship and banking facilities of the whole continent, with separate sections devoted to sport, general products, and literature. Neatly printed, furnished with a number of good maps, and handy in size, it is at once the business man's directory, the traveller's handbook, the investor's companion and the student's manual. Copies are available from the H. W. Wilson Co., 950 University Avenue, New York City.

Frank Thompson and T. M. Chubb have taken positions in the gas and electric division of the California State Railroad Commission. Mr. Thompson was formerly with the Los Angeles Gas & Electric Co., while Mr. Chubb was with the Pacific Gas & Electric Co.



The Blue Book of the Oil Industry

would duplicate a list of users of McAlear Controls. This quarter century old engineering organization has kept pace step by step with the rapid advances in oil refining methods and has been an important contributor to the industry's progress.

● The Triple Duty Pilot Operated Liquid Level Controller, The Pilot Operated Pressure Regulating Valve for Remote Control and The Streamline Body Diaphragm Motor Valve are some of the highly efficient McAlear Automatic Controls that have helped refineries reduce production costs and insure more uniform quality of product—and win preeminence for McAlear in the industry. Write for the latest McAlear catalog.

McALEAR

The name that means

SCIENTIFIC PERFORMANCE

in Automatic Controls

THE McALEAR MFG. CO., . . . 1905 SO. WESTERN AVE., CHICAGO, ILL.
AUTOMATIC CONTROLS for PRESSURE, TEMPERATURE, LIQUID LEVEL and FLOW

X-Ray Examination of Pressure Vessels Safeguards Refining Industry

By W. L. NELSON

Those who are engaged in plant or engineering work that involves high-pressure vessels, lines or castings are aware of the doubts that assail the mind concerning the soundness of the interior of the metal parts. If defects are suspected there are only two alternates; one is to discard the part and the other is to take a chance. In the first case, curiosity may be appeased by cutting the part or weld open for inspection in which case the equipment is often useless even though it be sound and in the second case, doubt concerning the soundness of the equipment may be a ceaseless worry.

X-ray examination is a means of discovering hidden defects and no great power of imagination is necessary in order to grasp the vital importance of examining the inside of a metal as well as the outside. Even a thorough superficial inspection of many faulty metal parts fails to indicate the defect —but coupled with an x-ray examination it is possible to lower the chance of error so that long records of safety, soundness and dependability are possible. It is true that some of the manufacturers of pressure equipment are building an enviable reputation for themselves by the use of x-ray examinations of their products. Of perhaps greater significance, the banishment of doubt will permit us to approach the development of new processes that could never before be contemplated because of the high pressures and temperatures involved.

X-rays were discovered by Roentgen in Germany in 1895, but their immense value as a means of detecting internal voids, cavities or inclusions in metallic articles was not fully appreciated until about 1927, when the Cleveland foundry of the American Aluminum Co. of America installed equipment exclusively for the study of foundry products. Since that time the use of x-rays for such purposes has gained rapidly and the Boiler Code of the American Society for Mechanical Engineers now requires a complete x-ray examination of all welded seams in Class A unfired pressure vessels. In the case of fired pressure vessels the importance of x-ray inspection is even greater.

In many ways x-rays are similar to light, heat and other radiation of the electromagnetic spectrum. They affect photographic films, travel in straight lines and penetrate intervening matter in varying degree. This last property is the property utilized in examining metallic articles. All materials are not equally transparent to x-rays and hence a sound section of steel will absorb more x-radiation than most inclusions and more than a void space. The radiation that passes through the article may be permitted to register on a fluoroscope screen for visual inspection or it may be recorded permanently by action on a photographic plate.

The refining and natural gasoline industries are among the largest users of high-pressure, high-temperature vessels and fittings. Under these severe conditions, the value of an x-ray examination is of particular significance as a means of diagnosing the ailments or faults in steel parts. The thickness of metal that can be penetrated by x-rays is somewhat as follows:

Rating of tube—	Thickness, inches
200,000 volts peak	3
400,000 volts peak	5
Gamma rays (radium)	10

X-ray pictures or radiographs are usually used in the negative form and hence regions of lower density such as voids, cavities or cracks appear darker than the sound metal and inclusions of heavy material appear light. Obviously, any irregularities, due to differences in thickness or shape of the casting, will cause differences in the depth of shade. Mr. Van Horn[1] of the Aluminum Research Laboratories, catalogues the various defects as follows:

"1. Gas cavities, blow holes and minute gas porosity appear as well defined spherical or rounded darkened areas.

"2. Shrinkage, pipe and shrinkage porosity are

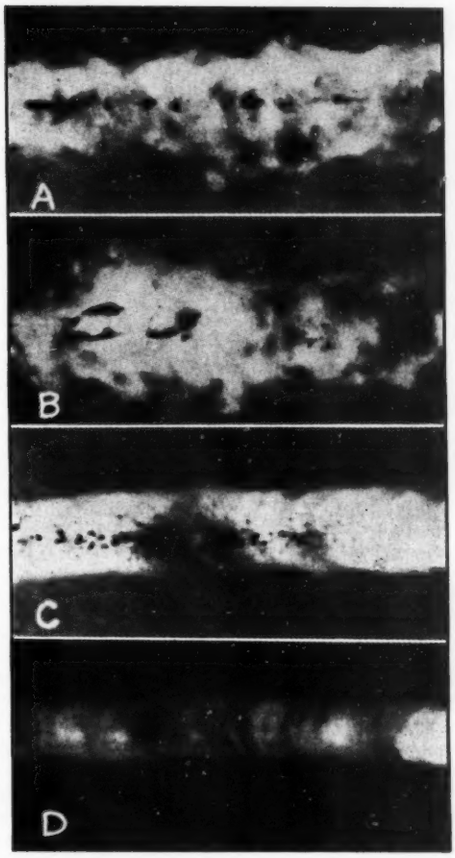


Fig. 1—(A) Radiograph of an oxyacetylene weld. Unevenness of fusion is indicated at the base of the V; (B) weld showing contraction cracks as a result of too rapid cooling; (C) oxyacetylene weld in which an excess of acetylene has given rise to gas bubbles and a porous weld; (D) good oxyacetylene weld. The white marks in the center of the weld are irregularities on the underside.—(Courtesy Phillips Industrial.)

[1]Radiography of Metal, Metal Progress, page 49, August, 1936.

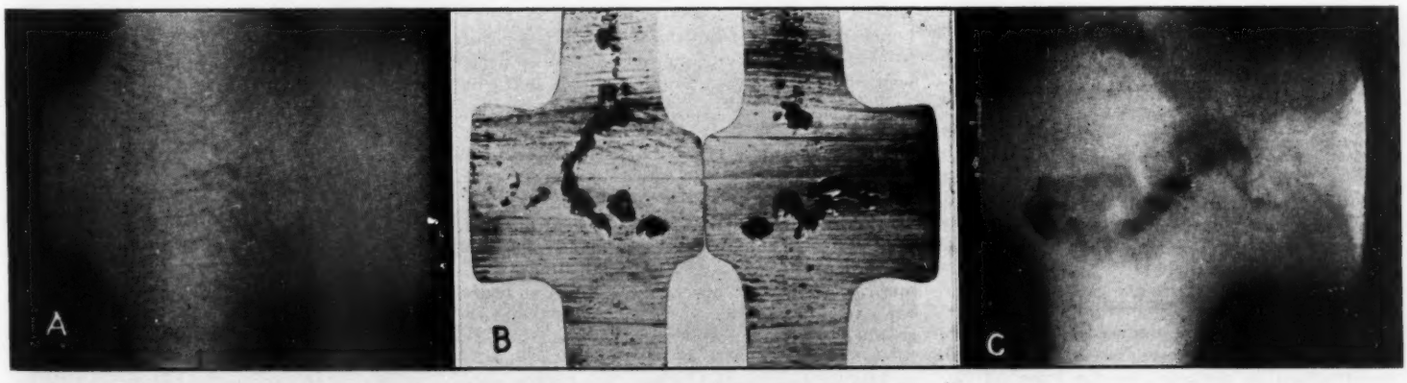


Fig. 2—(A) Radiograph of casting in which dendritic growth is indicated; (B) actual interior of the casting shown in C; (C) radiograph of casting specimen in which internal cavities are indicated.—(Courtesy General Electric X-Ray Corp.)

represented by filamentary or dendritic dark regions of irregular dimensions and indistinct outline.

"3. Misruns appear as very prominent darkened areas of variable dimensions with definite, smooth outlines where the metal has failed to fill.

"4. Sand inclusions occur as gray to black spots of an uneven or granular texture with indistinct extremities.

"5. Cracks are represented by darkened lines of variable width and are filamentary when derived from insufficient feeding or contraction (shrinkage) on cooling from the melt. Cracks originating from internal stress in solid metal are either angular or straight and are of more constant width."

By far the greatest use of x-rays in the petroleum industry is in the inspection of welds in pipe, pressure vessels and boilers. The defect that is most frequently found is slag inclusions and the other defects occur in the following order—porosity, cracks and incomplete fusion.

Over 35 companies are now engaged in examining pressure vessels by x-ray methods and thousands of such vessels have been inspected in this manner. During the last few years there has been an increased tendency among refiners to use welded pipe lines and fittings in refineries. Now that an adequate method of inspecting the internal condition of such welds is available, we may expect to see welded fittings and pipe in a dominant position among the methods of connecting pipe lines.

USING THREE FURNACES

(Continued from Page 62)

higher temperature on the clean oil cracking charge, which is withdrawn from the bottom.

Through high-pressure blending of the straightrun and reformed gasoline stocks before charging to the stabilizer, a maximum fixation of the butanes and other light ends in the stream is made possible. This contributes to the higher content of valuable volatile constituents in the finished stabilized product.

The combination unit was originally designed to take a low endpoint straightrun gasoline and to reform a 45-55 gravity cut of light kerosene or heavy naphtha. The remaining side streams from the crude tower were to be charged to the clean oil cracking furnace. However, in view of the high octane gasoline produced by the unit, it will apparently be feasible to withdraw more straightrun gasoline than was originally anticipated.

At the present time, the following streams are taken from the crude tower:

Endpoint (°F.)	Fraction—	Crude per cent
350-500	Reforming stock	15-18
350	Straightrun gasoline	18-20
670	Virgin gas oil	12-15
.....	Reduced crude	45-55

The plant is designed to care for a large volume of recirculation of the various streams to the clean oil cracking and viscosity breaking stages of the process. On standard operation, taking 15,000 bbls. per day of crude charge, the respective flow circulation rates are approximately as follows:

	Bbls. per day
Reforming stock	2,000
Clean oil cracking stock	20,000
Viscosity breaking stock	10,000

Since conditions of operation of the unit are expected to be varied shortly, the above figures represent only approximations of representative runs.

Product Specifications

The blended gasoline produced by the unit, in its finished stabilized form, meets the standard specifications as marketed by the Pure Oil Co. No blending is necessary, excepting for the addition of lead. Yields over a year's time will vary with the seasonal changes made in the vapor pressure of the product. The gasoline averages 64-65 octane and has a lead susceptibility to 74 octane of 1.1 to 1.2 cc. The sulfur content is well below specification requirements.

Under present runs, the cracked fuel oil product averages 7.5 to 8.5 gravity. The Bunker C fuel has a Furol viscosity of 250 at 122° F. Operators expect to adjust the gravity of this product to meet market demands. All specifications of the gasoline and fuel oil are as of present operations. When guarantees and test runs on the unit are completed, the conditions and product yields and characteristics are expected to be altered.

Van crude, charged to the combination unit, is similar to East Texas crude, containing, however, more asphalt, and a lower octane straightrun gasoline. The characterization factors show a highly paraffinic gasoline and kerosene, and gas oil and lube stocks similar to those of Mid-Continent crudes. The heavy oil range is valuable only as cracking stock. Sulfur is relatively heavy in the fuel oil fraction.

The crude distillation unit is so designed that a 400° F. endpoint Stoddard solvent, as well as a regular kerosene may be cut. The outside steam strippers and other equipment for withdrawing these products are already installed. In addition, a furnace oil stripper can be added to the high-pressure tower for future cutting of straw colored furnace oil. This is allowed in the design of the unit, but has not yet been installed.

Although Van crude is charged primarily to the unit at present, East Texas crude may be run with very few adjustments. The unit is exceedingly flexible, at the same time showing a remarkable insensativity to disturbing factors, contributing to a minimum of operating trouble and expense.

Use of Airplane Allows Closer Supervision in Rodessa Field

By MITCHELL TUCKER

Perhaps the most recent application of airplanes to the petroleum industry is their use in moving about from point to point in one field, particularly during the rainy season when roads are almost impassable. The Taylor Cub ship, shown here, has been used quite successfully for this purpose in the Rodessa field, and many economies of time and money are claimed by its operator, connected with a large drilling contracting firm in North Louisiana. The Rodessa field now comprises about 50 square miles. Small improvised landing fields were cleared at the main office of this contractor near the townsite of Rodessa, and at three other outlying points in the field. The Rodessa municipal airport to the south of the field serves as a fifth possible landing place. A small hangar or shed was constructed in the office yard.

—J. E. Hampson, Shreveport

Small airplane which is being successfully used by one large drilling company in Rodessa

The majority of activity in Rodessa at this time is in the Cass County side of the field, about 15 miles from the office. Usual driving time to the southwestern edge of development is over an hour, but a round trip with tool pusher, small supplies, or orders, can be made by airplane in about 15 to 20 minutes. Also, these trips can be made in most all kinds of weather, while for several weeks this spring the roads were practically impassable to cars or trucks.

This ship carries the pilot and one passenger and has a reasonably large baggage compartment for the transportation of small supplies. Its cruising speed is about 80 miles per hour, and can land safely at speeds of about 25 miles per hour. Air wheels, 18 by 8.3, are used, which permit landing on rather rough ground if necessary without series results. The fuel tank carries 9 gallons, an average consumption of about 30 miles per gallon being obtained. The ship is also suitable for long trips when desired.

Use of the ship for field development work has presented many advantages during its use at Rodessa such as: Increased supervision at formerly inaccessible points; reductions in shutdown time by rapid delivery of supplies or repairmen; and greatly reduced garage, fuel, tire and other bills incident to operation of cars and trucks over rough and muddy roads.

Directory of Trade Names

The magazine "Steel" presents its 1937 directory of "Trade Names of Alloy and Special Analysis Irons and Steels." This tabulation of 14 pages is the offering of 300 suppliers of industrial ferrous products. The analyses of the various alloys are not given.

Low Lubricating Stock Loss Is Feature of New Lion Oil Vacuum Filter

By J. J. ALLISON and J. B. ROGERSON
Lion Oil Refining Co., El Dorado, Ark.

The petroleum industry has waited long for some outstanding improvement in the mechanics of filtration for the handling of their clarification problems. Since the acceptance of the contact filtration process the petroleum industry almost unanimously has used the Sweetland pressure filter for the separation of filter clay from lubricating oil stocks.

In general the improvements made on the Sweetland press since the beginning of contact filtration have been labor-saving devices of minor importance. As for the quality of filtrate, the influence of any or all improvements has been practically negative. The adoption of monel metal cloth replacing the canvas-covered filter leaf may have reduced maintenance costs with high-temperature filtration, but the yield was still a filtrate requiring after-clarification to free it of clay fines. The development of the Oliver precoat vacuum filter offers an entirely new and better method of clarification. Although recently introduced in lubricating oil refining, it has already attracted widespread interest throughout the industry.

The precoat filter installation at the Lion Oil Refining Co. plant in El Dorado, Ark., operates continuously for a period of seven days, requiring no attention over this entire period, other than for the disposal of spent clay. From the beginning of the cycle to the end the filtrate is entirely free of solids; no after filter clarification is required. Perhaps the most promising performance feature is the ratio of actual plant loss of lubricating stock to spent clay which over a two months period measures slightly less than one-half per cent of the charge to the filter. This installation is processing an intermediate lube distillate measuring approximately 68 seconds S.U. viscosity at 210° F. The stock is filtered without dilution and no naphtha wash of cake or any other oil-recovery process is used.

In general appearance the precoat filter resembles the standard Oliver continuous filter. The major differences are in the way a filter aid is used and in the cake discharge. The operating cycle consists of two phases—precoat formation and clarification.

Precoating the Filter

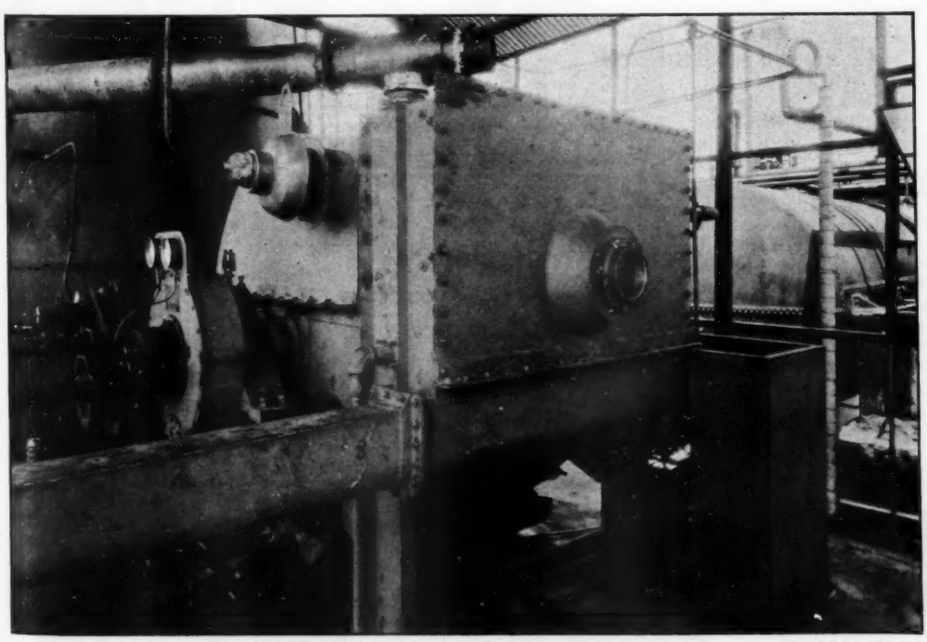
High flow-rate, diatomaceous earths are used for precoat formation. This material, commonly known as filter aid, is mixed into a slurry with a nonviscous petroleum fraction. Either gas oil or filtrate blended with naphtha will make a satisfactory slurry. The slurry is fed into the filter tank

Lion Oil's pressure filter with panel removed to show troughs leading to the scroll conveyor

in which a monel metal cloth covered cylindrical filter drum revolves. Vacuum applied to the drum builds upon the filter surface a cake or "precoat" of filter aid. The precoat operation requires approximately one hour off stream for building a cake of 2-inch thickness.

The oil to be clarified is then fed into the filter tank where a liquid level is maintained. Constant vacuum on the rotating drum filters the oil through the precoat, leaving a layer of solid (filter clay) on the precoat surface. As the drum surface leaves the oil level, drying of cake starts and continues to the point of discharge. The discharge of filter clay is accomplished by means of an advancing knife-edge which shaves off the clay layer, together with a thin film of the filter aid; thus a fresh surface of precoat is presented for further clarification with each revolution of the filter drum. The spent clay is removed from the filter by means of a scroll conveyor.

There are a number of points of flexibility about the assembly which enable operation changes to be made to meet various conditions encountered in the processing of different type stocks. The throughput rate of the filter can be controlled in four ways: (1) by varying the rotating speed of the filter drum; (2) by varying the liquid level, that is, the degree of submergence of filter drum in the oil; (3) by varying the filtration temperature; and (4) by the amount of vacuum applied to the filter drum.



Precoat vacuum filter installation at Lion Oil Refining Co.'s El Dorado, Ark., refinery

Description of Filter

The precoat vacuum filter installed at the Lion Oil plant is a 5-foot by 4-foot unit, having approximately 65 square feet of filter surface. A 5-hp. electric motor is mounted on the unit to drive the drum and agitator for maintaining a homogeneous suspension of the slurry. A 3-hp. motor operates the clay discharge scroll conveyor. Vacuum is maintained by means of a dry vacuum pump. This is a reciprocating, feather-valve type pump, 14-inch cylinder and 8-inch stroke and it is driven by a 20-hp. electric motor. A receiver is installed between the filter and vacuum pump for separation of liquid from the gas entering the vacuum pump.

With this installation, hot flue gas direct from a furnace stack was supplied to the filter in preference to atmospheric temperature air. This fea-

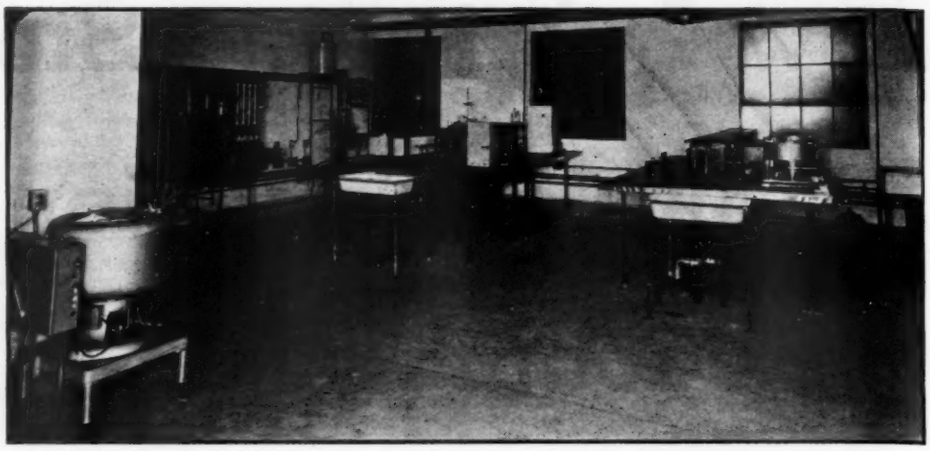
ture of construction was included to insure driest possible cake and to safeguard against possible oxidation of filtration. However, numerous test runs made using atmospheric temperature air showed no impairment of filtrate and no measurable increase of oil loss in spent clay.

Capacity of Filter

Operating at a drum speed of 2.5 minutes per revolution, at 36 per cent filter drum submergence and with charging stock at a temperature of 300° to 500° F., the filter has a filter rate capacity of 16 gallons per square foot per hour. The knife advance into the precoat is .0004 of an inch per revolution of the filter drum. At the start of the seven-day filtration period the precoat thickness is about 2 inches. At the end of the period the precoat is about one-quarter of an inch thick. The filter rate throughout the period is constant and at no time does the filtrate show any trace of solids. Operations at 55 per cent permissible drum submergence indicate a full capacity of 22 gallons per square foot per hour may be expected. Due to the small amount of clay required (5 pounds per barrel of oil) and the low loss of oil to clay encountered, no attempt is made to reclaim the oil from spent clay.

As the operation is continuous and the various phases of the cycle are performed automatically, there is very little variation in the results obtained. The following tabulation is an average of 359 hours of operation:

Temperature of feed, deg. F.	242
Temperature of gas in filter hood, deg. F.	168
Operating vacuum (H.G.), inches	21
Drum speed—min./rev.	2.5
Filter aid consumption, lbs./bbl. oil.	.04
Filtrate rate gals./sq. ft./hr. (based on total area and 36 per cent drum submergence)	16
Oil loss in filter cake, per cent by weight of cake	27.23
Net oil loss—gals./bbl. stock charged	.195
Net oil loss to stock charged, per cent	.470



Typical laboratory interior using stainless-steel table tops

Further reduction of drum speed and consequent reduction of filter aid consumption as shown in the following tabulation (which is an average of 44 hours operation) did not lower filter rate and it is believed that a still lower drum speed is practical. While the rate shown below is slightly higher than at the greater drum speed, it is believed that an average over a longer period would not show a substantial increase over the 16-gallon rate for the 2.5 minutes drum speed:

Temperature of feed, deg. F.	261
Temperature gas in filter hood, deg. F.	188
Operating vacuum (H.G.), inches	17
Drum speed, min./rev.	3.5
Filter aid consumption, lbs./bbl. oil	.025
Filtrate rate gals./sq. ft./hr. (based on total area and 36 per cent drum submergence)	18.1
Oil loss in filter cake, per cent by weight of cake	26.90
Net oil loss—gals./bbl. stock charged	.192
Net oil loss to stock charged, per cent	.458

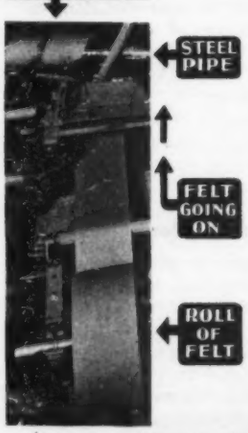
For contact filtration of bright stocks or oils considerably heavier than that processed at the Lion refinery, it may be advisable to install some means for recovering oil from spent clay.

Test results obtained from the operation of an experimental precoat filter of laboratory size have shown that bright stocks can be filtered without dilution. But if it is desired to filter in naphtha solution, lower vacuum can be employed and the cake washed by means of a naphtha spray before reaching the discharge zone. If high solvent losses are encountered, the gases from the vacuum

The FELT in the HILL-HUBBELL Process GIVES

EXTRA PROTECTION
MAKES STEEL PIPE LAST LONGER

FELT ON PIPE



We use a bonded wrapping of bitumen impregnated FELT, most often inorganic, in the HILL-HUBBELL Process of coating STEEL PIPE for a very definite reason. Buried pipe lines are subject to mechanical forces that affect the coating, and we concur with eminent authorities when they say that pipe coatings should have a wrapping of FELT for shielding and reinforcing. The primary purpose of coating STEEL PIPE is to WATER-PROOF it and to insulate it from electric currents. Bonded FELT gives additional strength and prevents soil-stress of the coating—therefore EXTRA protection. However, FELT must be PROPERLY APPLIED to serve its purpose. The HILL-HUBBELL Process applies FELT MECHANICALLY in the most efficient manner known today. No matter how many miles of STEEL PIPE there are in an installation, each and every inch is properly protected.

BITURINE ENAMEL, an all-coal tar product applied by the HILL-HUBBELL Process, gives MAXIMUM protection.

Three coats of Enamel, one wrapping of Felt, and one covering of Kraft paper are applied mechanically at ONE time with ONE labor cost. There are no bubbles, skips or holidays with the HILL-HUBBELL Process.

BUY STEEL PIPE,
Mill Coated and Wrapped
at any of these Mills

Central Tube Company
Jones & Laughlin Steel Corporation
National Tube Company
Republic Steel Corporation
Spang, Chalfant & Co., Inc.
The Youngstown Sheet & Tube Company

This bulletin with many illustrations "shows how" it is done,—also contains prices. Write on your letterhead for copy.

GENERAL PAINT CORPORATION
HILL, HUBBELL & CO. • Division • Cleveland, Ohio
TULSA • SAN FRANCISCO • LOS ANGELES • OAKLAND • PORTLAND • SEATTLE • SPOKANE

pump can be exhausted through a condenser or absorber to minimize the loss.

Another method for oil recovery is to filter the stock at high temperatures without dilution and drop the spent clay into a tank of naphtha or other solvent which is to be used in the dewaxing process. The slurry of spent clay and solvent can then be charged to a second filter from which the spent clay could be disposed of in the conventional manner. An idle Sweetland could, of course, be utilized for this job. However, a small vacuum filter operating under low vacuum, with the discharge blade stationary, could do this reclaiming job continuously without the inconvenience of intermittent pressure operation.

It is conservatively estimated that such an installation would reduce by 50 per cent the labor costs of the average bright stock contact plant, practically eliminate solvent losses, and yield a filtrate entirely free from suspended solids.

"Oil Fuels and Burners"

An informational manual for service men, salesmen, mechanics and technical men, which takes into consideration the recent large development in oil burners, especially the automatic domestic type, has been published under the title "Oil Fuels and Burners." In the book, of 375 pages, the author, James A. Moyer, includes many practical charts and diagrams for layout of oil-burner systems, automatic-control devices, trouble charts of motors and generators, calculation of heating requirements, and heat insulation of walls, roofs, and floors in old as well as newly constructed buildings.

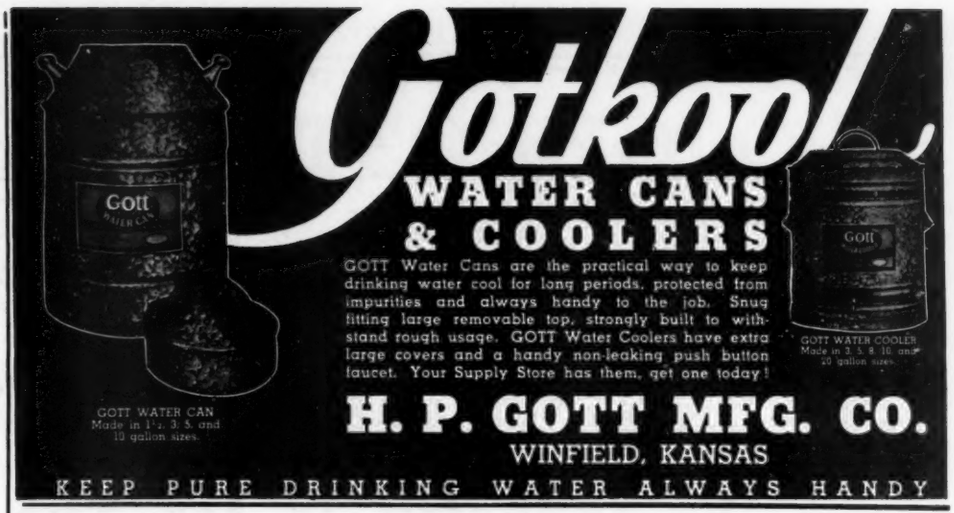
Because many up-to-date oil-burner manufacturers and distributors now furnish combined oil-burner and air-conditioning equipment, a chapter on air conditioning is included. Other chapters of the book, which is as an extension of a course that was recently prepared by the author for the educational bureau of the United States navy, include: Oil fuels, combustion of oil fuels, atomization of oil fuels, oil burners, automatic-control devices, oil-fuel tests, heat measurements, calculation of heating systems, calculation of heating requirements, estimating saving from heat insulations of walls and roofs, fans and blowers, drafts and chimneys, and air-conditioning tests. The book is published by the McGraw-Hill Book Co., 330 West Forty-second Street, New York City at a price of $4.00.

Britain's Oil Imports Rise

Great Britain's petroleum requirements are increasing along with those of other countries, figures recently released showing a gain of 6.3 per cent for the first five months of 1937 compared to the corresponding period in 1936. The record for May alone is impressive. In that month British petroleum imports increased by nearly 18 per cent with particular emphasis on motor fuel. Great Britain required in excess of 100,000 bbls. of motor fuel per day from foreign suppliers in addition to crude oil which was imported for processing.

Petroleum Register Published

The Petroleum Register for 1937 is now off the press. This year's edition, the eighteenth annual edition, contains much general statistical information on the petroleum industry as well as providing a complete directory of the industry and its related branches. The book, which contains over 960 pages, is divided into the following sections: Buyer's guide, refiners, compounders and grease manufacturers, marketers and jobbers, producers, pipe lines, natural gasoline manufacturers, exporters, foreign companies, trade and brand names, petroleum personnel, refineries and superintendents, natural gasoline plants, statistical, and tankers. The directory is available at a price of $10 from the Petroleum Register Corp., 165 Broadway, New York City.


Gott
WATER CAN
GOTT WATER CAN
Made in 1½, 3, 5, and 10 gallon sizes.
Gotkool
WATER CANS
& COOLERS
GOTT Water Cans are the practical way to keep drinking water cool for long periods, protected from impurities and always handy to the job. Snug fitting large removable top, strongly built to withstand rough usage. GOTT Water Coolers have extra large covers and a handy non-leaking push button faucet. Your Supply Store has them, get one today!
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

Pumping Costs go Way Down When . . . .

General Power Units are Installed.

General Power Conversions of Ford V-8 Engines brings to you the engineering and production advantages of the world's largest producer of Ford V-8 power plants. Low initial cost, low installation cost and low maintenance cost are factors that can't be overlooked when buying power units. General Power Conversions are available in Single, Dual and Triple units.

Write, wire or Phone

GENERAL POWER CO.

QUAPAW, OKLA. Phone 64

☆ ☆ ☆ ☆ ☆ ☆ ☆ **The verdict of the industry is for The Solvent Dewaxing Process** ☆ ☆ ☆ ☆ ☆ ☆

In the oil industry today there is little doubt of the superiority of The Solvent Dewaxing Process.

Solvent Dewaxing equipment is now in use or under construction in fifteen refineries.

Licensed by

TEXACO DEVELOPMENT CORPORATION

A SUBSIDIARY OF THE TEXAS CORPORATION

135 EAST 42nd STREET

NEW YORK, N. Y.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Inhibitor or Slushing Compound for Preventing Rust

Some years ago it was reported that the U. S. government departments had prepared a compound for preventing rust. Do you have the directions for making this?—H. F.

There was a large quantity of iron and steel material stored during and after the World War which had to be protected from rust. Several types of coatings were suggested but those found to give good results were the preparations containing an emulsified chromate solution. These contained kerosene, petrolatum and wax. The U. S. Bureau of Standards has published several formulas, of which this is an example:

	Parts
Rosin H grade	20
Kerosene	10
Petrolatum	100

Melt the rosin and mix with the hot petrolatum. Remove away from fire, then stir in the kerosene. Wax may be added if it is desired to raise the melting point. Sodium chromite 2 to 10 parts dissolved in hot water to make a saturated solution is emulsified with the hot petrolatum.

Reference: U. S. Bureau of Standards, Cirs. 200 and 214, also T. P. 176.

Analytical Methods for Free Sulfur in Gasoline

Can you give me the details of a reliable, but not complicated, laboratory method for determining free sulfur in gasoline?—G. A.

There are several quantitative methods for the estimation of free sulfur in gasoline. Two will be outlined, others are mentioned in the references cited.

The Standard I.P.T. Method is described by Nash and Howes.

The sample of gasoline, 100 gm. portion, is shaken for one hour with 2 ml. of pure mercury, then a few ml. dil. HCl (1:100) added to coagulate the HgS produced. Filter through a Gooch crucible and wash with dil. HCl. Transfer the crucible to a beaker and digest with 30 ml. conc. HCl and 10 ml. conc. HNO_3 until all Hg, S and HgS are dissolved.

The resulting liquid is neutralized with sulfur-free NH_4OH, 1 ml. conc. HCl added and the sulfate precipitated by $BaCl_2$ solution, filtered, washed and weighed as $BaSO_4$.

Wirth III and Strong have proposed a method for free sulfur in gasoline.

A standard solution, 0.5 M, of C.P. butyl mercaptan in cleaner's naphtha, free from sulfur and mercaptans, is prepared. Three ml. of this solution is added to 147 ml. of the gasoline sample. Shake with 20 ml. 30° Be. sodium plumbite until the reaction is complete. The lead mercaptide is now converted back to mercaptan by washing with half the volume of 20 per cent H_2SO_4. Shaking with 50 ml. of a 10 per cent acidified cadimum chloride solution removes the liberated H_2S. The excess mercaptan is found by adding an excess of N/0.05 silver nitrate solution to 100 ml. of the gasoline and titrating back with ammonium thiocynate solution.

The mercaptan converted to disulfide by the free sulfur is the difference between the quantity originally added and that in the residual gasoline. From this the free sulfur may be determined.

The method is not applicable to oils heavier than kerosene.

References: Nash and Howes, Principles of Motor Fuel Preparation and Application, Vol. 2, page 33. Wirth III and Strong, Determination of Elementary Sulfur in Gasoline and Naphtha, Ind. Eng. Chem. Anal. Edn., 8, 344, 1936.

Significance of Carbon Residue for Asphaltic Fuel Oils

There has been some dispute as to the importance of Conradson carbon residues when dealing with fuel oils of high asphalt content. What is the significance of this test when fuel oils of the same viscosity but of different content and carbon residue are compared?—L. W. C.

The A.S.T.M. Standard Method of Test for Carbon Residue of Petroleum Products (Conradson carbon residue), D 189-36, is a procedure for determining the quantity of coke-like material remaining when a weighed portion of an oil is subjected to destructive distillation in apparatus designed to exclude air, to permit proper control of rate of heating, and to eliminate possible condensation of distillates in or on the oil contained. The original procedure was devised by Dr. P. H. Conradson, as described in 1912.

Wilson and Barnard state:

"While the significance of this test has been the subject of considerable dispute, recent evidence indicates rather clearly that when using the same engine under carefully controlled conditions the carbon deposit in the combustion space is a function of this carbon residue value of the oil, though the carbon deposit increases much less rapidly than in direct proportion to this value. Of course, if the oils have different viscosities at the operating temperatures the one with lower viscosity tends to pass the rings in larger quantities and thus affect the amount of carbon formation. Furthermore, in actual service the condition of the engine, and particularly the type and fit of the rings, as well as changes in mixture ratio, operating temperature, oil viscosity, etc., will obscure or outweigh ordinary differences in carbon residue between two different oils. In spite of this, however, all other things being equal, an oil of lower carbon residue is less likely to give carbon troubles than an oil of similar viscosity and distinctly higher carbon residue. Of course, improvements in engine design and workmanship are tending to decrease oil consumption and minimize carbon formation."

References: Proc. Eighth International Congress Applied Chem., N. Y., Sept., 1912, Vol. 1, 131; Ind. Eng. Chem. 4, No. 11, 1912. Wilson and Barnard, Fourth, Proc. A.S.T.M. 28, Part 2, 1928. A.S.T.M. Stands. Petroleum Products, Sept., 1936, p. 61.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Litharge

(Lead monoxide, sublimed)

Use—Treating as sodium plumbite solution, grease making, cements and lutes.

Form—Yellowish heavy crystalline powder.

Formula—PbO.

Specific gravity—9.375.

Melting point—1,630° F.

LIMITATIONS

	Per cent
Lead oxide, min.	99.0
Copper, max.	.015
Iron, max.	.015
Antimony, max.	.010
Apparent density—gms/sq. cu. in.	7 to 15
Solubility in 14° Be. NaOH	3.00
Coarse particles on 325 screen, max.	3.00
Red lead (Pb_3O_4)	0.30
Total impurities	1.00

The milled litharge has about the same composition but differs in color, light brown, and apparent density 24 to 28. It is not so soluble in caustic soda solutions as the sublimed product.

Reference: U. S. Navy Department Specifications, 52 L 10 a.

Sulfur in Gasoline Is Related to Lead Susceptibility

What is the reason why some gasolines of the same octane number do not give the same increase in octane number when equal quantities of the lead fluid are added?—L. R. N.

I am not certain that a positive and direct answer to the question can be made. The first suggestion is that the kind of hydrocarbons present, but probably the nature of the impurities, especially sulfur compounds, are more liable to explain differences in response to additions of tetraethyl lead. One reason for this is the ease with which sulfur and lead combine. A very valuable contribution to the study of this subject has been made by Schulze and Buell.

A number of gasolines were treated until the sulfur content was reduced to a very small percentage then tests were made comparing octane ratings before and after lead additions. One sample contained only 0.037 per cent sulfur prior to disulfurization, with vapor pressure at 12 pounds. With sulfur removal only, the product was raised two octane numbers. However, 1 cc. of lead raised the octane number of the disulfurized sample to over 81 as compared with 75.6 on the untreated product. Also, 1 cc. of lead in the purified gasoline gives the same result as 2.68 cc. in the unsulfurized gasoline.

A reference fuel containing sulfur 0.005 per cent was treated by additions of various sulfides, as shown in the table.

EFFECT OF SULFUR ON LEAD SUSCEPTIBILITY

Sulfur compound—	Wt. % sulfur added	Oct. No. at cc. TEL/gallon 0	1	2	3	6
Reference fuel	0	51.0	63.5	70.7	74.4	79.5
Ethyl sulfide	0.407	50.8	56.5	60.8	64.2	70.7
Ethyl disulfide	0.4100	48.4	52.4	55.6	58.2	64.5
Ethyl sulfide	0.031	51.0	61.9	67.4	71.4	77.8
Ethyl disulfide*	0.031	50.5	60.1	65.5	....	....

*Interpolated values.

Here the effects of both high and relatively low concentrations of sulfur are shown.

Reference: Schulze and Buell, The Oil and Gas Journal, Oct. 10, 1935, page 22.

NATIONAL BANK OF TULSA

Tulsa, Oklahoma

Statement of Condition June 30, 1937

RESOURCES

Cash and Due from Banks	$ 22,643,092.58	
U. S. Government Securities	14,631,970.33*	
Other Bonds and Warrants	6,517,528.69*	43,792,591.60
Loans and Discounts		14,745,688.73
Overdrafts		3,888.26
Income Receivable Accrued		162,787.75
Stock in Federal Reserve Bank		180,000.00
Investment in Bank Premises		2,401,479.77
Customers' Liability under Acceptances		5,846.50
TOTAL		$ 61,292,282.61

LIABILITIES

Deposits		$ 54,953,049.04
Acceptances Executed		5,846.50
Income Collected not Earned		64,693.14
Interest, Taxes, etc., Accrued		61,190.08
Reserve for Preferred Dividend		24,375.00
Capital—Preferred	$ 1,625,000.00	
Capital—Common	2,250,000.00	
Surplus	2,125,000.00	
Undivided Profits and Reserves	183,128.85	6,183,128.85
TOTAL		$61,292,282.61

* Of the total of $21,149,499.02 U. S. Government Securities and Other Bonds and Warrants $14,217,795.39 mature within five years.

The Oil Bank of America

Member Federal Deposit Insurance Corporation

Have You Renewed Your Subscription? Do It Promptly

Carbon Black Sales

Sales of carbon black by manufacturers to brokers and consumers rose from 387,536,000 pounds in 1935 to 467,736,000 pounds in 1936; of the latter, 313,018,000 pounds (67 per cent) were sold in the United States and 154,718,000 pounds (33 per cent) exported. Of the domestic sales 278,018,000 pounds (89 per cent) were consigned to rubber companies, 17,787,000 pounds (6 per cent) to ink companies, 6,914,000 pounds (2 per cent) to paint companies and 10,299,000 pounds (3 per cent) to companies producing miscellaneous products. These data indicate a continued increase in the importance of the rubber industry as a market.

Exports of carbon black totaled 154,718,398 pounds compared with 142,184,802 pounds in 1935, and 152,286,178 pounds, the previous peak of 1933. The United Kingdom continued the leading customer, while France and Germany again exchanged rank in second and third places, respectively. The total value of exports in 1936 was $7,250,704, compared with $6,673,016 in 1935.

The primary statistics of the carbon-black industry in 1935 and 1936 were as follows:

	1935	1936
Number of producers reporting	21	20
Number of plants	54	54
Quantity produced (pounds)		
Louisiana	64,875,000	59,201,000
Texas:		
Breckenridge	[1]24,513,000	12,330,000
Panhandle	263,361,000	321,576,000
Total Texas	[1]287,874,000	333,906,000
Other States	[1]	[2]18,238,000
Total United States	352,749,000	411,345,000
Produced by:		
Channel process (pounds)	316,284,000	366,876,000
Other processes [3](pounds)	36,465,000	44,469,000
Stocks held by producers Dec. 31 (pounds)	136,086,000	79,582,000
Sales (pounds):		
Domestic:		
To rubber companies	213,708,000	278,018,000
To ink companies	15,177,000	17,787,000
To paint companies	6,550,000	6,914,000
For miscellaneous purposes	9,916,000	10,299,000
Total	245,351,000	313,018,000
Exports:		
United Kingdom	38,982,000	46,957,000
France	19,000,000	26,748,000
Germany	23,106,000	16,225,000
Other	61,097,000	64,788,000
Total	142,185,000	154,718,000
Losses (pounds)	926,000	113,000
Value (at plants) of carbon black produced:		
Total (dollars)	13,755,000	16,110,000
Average per pound (cents)	3.90	3.92
Estimated quantity of natural gas used (M cubic feet)	241,589,000	283,421,000
Average yield per M cubic feet (pounds)	1.46	1.45

[1]Oklahoma and Wyoming included with Breckenridge district.
[2]Oklahoma and Wyoming.
[3]Roller, "special," thermatomic, and Lewis.

Bonus for Schuler Discovery

LITTLE ROCK, Ark.—The first application for a bonus under the Development of Natural Resources Act has been filed with Arkansas state officials by the Lion Oil Refining Co. and Phillips Petroleum Co. for opening of the new Schuler oil field in Union County. T. H. Barton, president of Lion, said, the two companies have agreed to turn the bonus of $1,000 over to some charitable or civic enterprise. The claim is based on an act passed by the Arkansas legislature in 1935 granting a bonus to any individual, firm or corporation developing a natural resource of the state in a new area. The Lion and Phillips companies jointly own the 80-acre tract in the Schuler field on which the discovery well, No. 1 Morgan, is located. A warrant for the bonus is said to have been prepared by the state auditor.

Canadian Gas Production

OTTAWA, Ontario.—Natural gas production from Canadian fields marketed in April amounted to 2,254,401,000 feet compared with 2,677,285,000 feet in March and 2,297,181,000 feet in April, 1936. Production during the first four months of 1937 totaled 12,035,710,000 feet compared with 12,646,781,000 feet in the same period of 1936.

Imports of mixed (natural and artificial) gas into Canada in April were 11,462,000 feet valued at $7,282 compared with 8,834,000 feet valued at $6,071 in March.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Use of Superheaters on Drilling Rigs

I am interested in knowing to what extent the use of superheaters in the steam lines of drilling rigs has been successful in the United States.—J. H. F.

In his "Rotary Drilling Handbook," J. E. Brantly has the following to say about superheaters at a drilling rig:

"A point of intense interest and very practical importance is the degree of usefulness of the superheater in oil field service. While there are many excellent treatises on superheated steam and its value, they are generally confined to turbines and reciprocating engines running on short intake cut-offs where fullest advantage of the adiabatic expansion of the steam may be obtained. The theories and practices which govern the use of superheated steam in these engines are not fully applicable to the relatively inefficient, maximum late cut-off, oil field engines and pumps, and while the superheater is unquestionably useful in oil field service, it is much less so than in the stationary power plants where more efficient prime movers or engines are employed.

"The questions of primary importance in an oil field boiler plant are, first, how much additional work a superheater will give to the output of the boiler plant, and second, its value as compared to additional steam generating units or boilers.

"In the first place, a superheater is not a boiler and will not evaporate free moisture that has been pulled over from the boilers or condensed in the line. It will, however, change into an almost true vapor the hygroscopic moisture of saturated steam and thereby increase the steam volume or velocity through the steam lines. For 50 degrees of superheat, the increased volume is approximately 9 per cent; for 100 degrees, approximately 18 per cent, and for 150 degrees, about 27 per cent. Radiation losses of superheated steam are less than for saturated steam and, therefore, in addition to the increased volume there must be granted a decrease in pressure loss due to condensation. Efficient steam engines have an advantage in the additional heat, which cannot be taken in the inefficient oil field equipment and particularly in the direct-acting mud pump which consumes 75 per cent to 80 per cent of the boiler-plant output.

"It appears, then, that 100 degrees of superheat adds about 18 per cent to the volume of the boiler-plant output and will prevent appreciable pressure loss through radiation and condensation in the usual steam line. The net work increase is in excess of 18 per cent, depending on the line pressure drop of saturated steam. Twenty per cent to 22 per cent net power increase is a fair estimate. The field of usefulness of a superheater is therefore definitely delimited.

"The practical consideration of a superheater for oil field service involves an analysis of cost between the superheater and additional steam generating units. In any boiler plant capable of delivering steam at adequate pressure but in insufficient volume, the addition of 20 per cent in boiler capacity would just equal the use of the superheater, adding 100 degrees of heat to the steam. In other words, if there are five boilers in the battery which can generate sufficient pressure, but insufficient volume, either a sixth boiler or a superheater will be of equal value in power delivery. Where there are fewer than five boilers in the original battery, the addition of a boiler will be more advantageous than the use of a superheater. Second, any boiler plant that produces steam in sufficient volume but of inadequate pressure, can be improved in efficiency by the use of a superheater, while additional boilers are of no value whatsoever. In other words, in ordinary oil field practice, boiler plants producing steam of less than 300 pounds per square inch pressure can be improved in power delivery to the rig, while 300-pound and higher pressure steam cannot be improved in practical efficiency if the steam volume is adequate."

Repressuring a Small Lease

We are faced with a problem of repressuring a small field in Shackelford County, Texas. There are 40 wells in the field of which we own 15 in the center. The producing formation is Bluff Creek sand found at 1,800 feet. At this time the operators have failed to reach a pooling agreement for repressuring and the results of repressuring our lease alone are doubtful. We will appreciate any information you can give us on this problem and repressuring in general, also the names of any authoritative publication covering all phases of repressuring, waterflooding and other secondary recovery methods.—G. B. R.

There have been a great many articles published in The Oil and Gas Journal upon repressuring practice and if you have a file of this magazine you can locate same by referring to the semiannual and annual indexes. They are too numerous to list in a letter but you will find them in many issues of The Oil and Gas Journal extending back to the early development of this method of secondary recovery.

One of the best compilations on this subject has been done by Wentworth H. Osgood in two volumes entitled "Increasing the Recovery of Petroleum."

In various volumes of the Petroleum Development and Technology issued by A.I.M.E. you will find special papers dealing with repressuring problems.

You might be especially interested in Tech. Paper 470, U. S. Bureau of Mines, by Harry B. Hill, on the "Results of Air Repressuring and Engineering Study of William Pool, Putnam-Moran District, Callahan County, Texas." A copy of this paper might be secured from the U. S. Government Printing Office, Washington, D. C.

While these references will be of interest to you for general information it is probable you will secure the best results in repressuring your property if you will engage a consulting geologist and engineer to outline this work and also secure representative cores of the producing formation and have them examined in a laboratory.

You state you own only a portion of the wells in the field under consideration and no pooling agreement has been reached with the other owners. This does not necessarily preclude your carrying on secondary recovery work on your lease but it will be necessary to have full information concerning underground conditions and it would be well to have the advice of a competent geologist and engineer as to how to best proceed to increase the recovery of oil from your acreage.

Correlation of Producing Strata in West Texas and New Mexico

What is the name of the producing strata in the Yates pool, Pecos County, Texas? Is it lime or sandstone, and how thick is it? Is this formation similar to the producing strata in Winkler County, Texas, and the Hobbs field, Lea County, New Mexico?—J. S. S.

Production in the Yates field, Pecos County, Texas, comes from the porous limestone near the top of the "Big Lime." The "Big Lime" is of Permian age and the producing horizon varies in thickness but is generally reported as a net 100 feet more or less.

The following table gives comparative data on the three fields in which you are interested.

	Yates, Pecos Co., Texas	Hendricks, Winkler Co., Texas	Hobbs, Lea Co., N. Mex.
Acres in field	20,000	9,200	1,200
Average depth of wells	1,450 ft.	2,900 ft.	4,173 ft.
Top of producing zone	1,310 ft.	2,600 ft.	4,049 ft.
Producing formation	Yates lime	Big Lime	White Lime
Age of producing form.	Permian	Permian	Permian
Character of prod. form.	Dolomitic lime	Dolomite	Dolomite
Porosity	Porous	Porous	Cavernous
Type structure	Anticline	Anticline	Anticline

The principal similarities between the producing formations in these three pools is that all produce from lime of Permian age.

There are other producing horizons in the Yates field but they are small in area and it is assumed you desire information on the principal producing formation.

Ways of Finding Structure

What is the percentage of accuracy of seismograph shots in establishing the location of structures? Also what in your estimation is the "batting average" between seismograph crews and geological outfits?—F. B. S.

The first question you ask is one impossible of answer because no one knows nor has anyone any means of ascertaining how many structures exist beneath the earth surface. All that is known is that by careful geophysical exploration work it is possible to map structure and this may be done by any one of several methods or by combination of two or more.

If the second question relates to location of structures it is also impossible of answer because the 100 per cent factor is an unknown as to the number of structures.

We think you will find much of interest and perhaps an answer to the general problem confronting you if you will read a paper by Wallace E. Pratt, vice president, Humble Oil & Refining Co., Houston, Tex., entitled "Discovery Rates in Oil Finding," published on page 46 of The Oil and Gas Journal of March 25, 1937.

In this article Mr. Pratt gives a table showing the methods of discovery of the major oil fields in the United States during five-year periods since 1901. Of all fields found 47.3 per cent resulted from geological observations and 14.3 per cent through geophysical investigations. However, geophysical methods were first used during the 1926-1930 period in this compilation, but during the 1931-1935 period scored 55.0 per cent of all discoveries.

Mid-Continent Refinery Runs in July Exceeding 600,000 Barrels Daily

By D. H. STORMONT

Refiners in the Mid-Continent during July are increasing their daily crude runs to stills by a total of 12,000 bbls. to bring the average daily runs for the month to a total of 605,640 bbls., the first time in the history of the Mid-Continent runs are exceeding the 600,000-bbl. mark. This month's estimate, based largely on information supplied by the individual refiners as to the amount of crude they plant to process during the month, is more than 65,000 bbls. higher than was being run to stills in July of the previous year.

Increased operations by refiners in the East Texas district account for approximately one-half of the increase as one new refinery was placed on stream and activity was resumed in one plant shut down during June. Total runs for the district amount to 62,470 bbls. daily.

The latest refinery to be added to the list of East Texas plants is that of the Talco Asphalt & Refining Co., located at Mount Pleasant in the Talco field. At present only the plant's skimming unit is in operation. However, a cracking unit is now nearing completion, and when completed the plant will have a daily capacity of between 5,000 and 7,000 bbls. Since the Talco crude being processed is of low gravity, facilities for manufacturing asphalt are also included.

East Texas Plant Reopened

General American Refining Co. is reopening its Gladewater plant following the completion of reconditioning work done during the plant's two-month shutdown. Average crude runs for the plant will approximate 3,000 bbls. daily. The company's Arp and Overton refineries have been abandoned.

Kansas shows the second largest increase in daily runs, a raise of 4,250 bbls. to a total of 145,900 bbls. daily. Standard Oil Co. (Indiana), Socony Vacuum Oil Co., Inc., and Vickers Petroleum Co. are increasing runs by 500 bbls. each, and Phillips Petroleum Co. by 1,100 bbls. daily. Kanotex Refining Co. is reducing its daily runs by 1,000 bbls.

Mid-Continent Crude Runs

Average Daily (Barrels)

(Advance estimate compiled by The Oil and Gas Journal)

	1935	1936	1937
January	426,070	501,600	531,535
February	448,810	519,960	541,790
March	451,510	478,760	533,875
April	467,765	506,775	558,385
May	466,015	513,510	572,855
June	485,015	527,225	593,625
July	494,210	539,370	605,640
August	508,960	557,650	.....
September	541,080	553,215	.....
October	533,620	536,330	.....
November	524,475	548,015	.....
December	511,025	535,500	.....

Operations by Refinery Districts

Daily crude runs

	July	June	Incr.
Arkansas	25,400	25,500	*100
East Texas	62,470	56,350	6,120
Kansas	145,900	141,650	4,250
N. Central Texas	47,285	47,695	*410
North Louisiana	43,600	44,250	*650
Oklahoma	177,520	174,310	3,210
Southwest Texas	23,450	22,900	550
W. Texas Panhandle	80,015	80,970	*955
Total	605,640	593,625	12,015

*Decrease.

United Refining Co., owner of a 1,200-bbl. plant 5 miles west of Russell, is operating its plant at the rate of 850 bbls. daily. A 2,000-bbl. cracking unit is now under construction at the plant and is expected to be placed in operation shortly. Shallow Water Refining Co., after a delay of some time, is opening its plant at Shallow Water, Kans., and will process 1,500 bbls. daily during July.

Four of the eight districts, Arkansas, North Central Texas, North Louisiana and the Panhandle, show decreases from June levels for July. The Panhandle district shows the largest decline, 955 bbls. The decrease is largely accounted for by a reduction of 750 bbls. in the daily crude runs at Phillips Petroleum Co.'s Borger refinery. Individual operating schedules of refiners in this area are mostly being held at June levels, although a few show minor changes.

Oklahoma Runs Increase

In Oklahoma daily runs are being advanced 3,210 bbls. to a daily total of 177,520 bbls. Johnson Oil Refining Co. is increasing operations at its Cleveland refinery by 1,200 bbls., and Empire Oil & Refining Co. is raising daily runs at its Ponca City plant by 700 bbls. Vinita Refining Co., owned by A. D. Warner of Vinita and associates, has completed the erection of a 100-bbl. skimming plant in section 20-26-20, Craig County, and is waiting for a permit to begin operations. The plant was closed down on the first of the month.

Although tankcar gasoline prices are not in line with those prevailing previous to the general crude raise last January, refiners in the Mid-Continent are generally well satisfied with the record consumption now taking place and the rate with which total stocks of motor fuel are melting away. Movement of gasoline at this time is heavy, with some refinerys behind in shipments and some finding themselves unable to meet contract shipments, buying motor fuel in the open market. Stocks of finished and unfinished motor fuel in the Mid-Continent are now only some 2,000,000 bbls. higher than at this time last year. Continued heavy consumption, which has been forecast for the latter half of the year, will no doubt serve to further reduce this figure and upon the close of the heavy consuming season stocks should be reduced to near working levels.

Estimated Daily Average Mid-Continent Refinery Crude Runs for July

ARKANSAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Berry Asphalt Co., Waterloo	2,000	1,100	1,200
Henry H. Cross, Smackover	6,000	5,000	5,000
Lion Oil Ref. Co., El Dorado	12,300	10,500	10,500
Macmillan Pet., Norphlet	2,500	2,000	2,000
Root Pet. Co., El Dorado	12,000	6,500	6,500
Stephens Ref. Co., Stephens	700	300	300
Total	35,500	25,400	25,500

KANSAS

Barnsdall Ref. Co., Wichita	6,000	5,000	5,000
Chase Ref. Co., Chase	800	550	550
Cusco Oil & Ref. Co., Chase	3,100	(*)	(*)
Derby Oil Co., Wichita	8,000	6,000	6,000
Dickey Ref. Co., McPherson	3,500	2,300	2,000
El Dorado Ref. Co., El Dorado	5,000	4,000	4,000
Falcon Ref. Co., Inc., Great Bend	1,000	650	650
Fredonia Oil & Ref. Co., Fredonia	250	100	100
Globe Oil & Ref. Co., McPherson	12,000	12,000	12,000
Kanotex Ref. Co., Arkansas City	12,000	5,500	6,500
Kreuger Ref. Co., Natoma	150	50	50
National Ref. Co., Coffeyville	8,000	5,800	5,800
Pet. Products Co., Chanute	800	800	800
Phillips Pet. Co., Kansas City	23,000	16,100	15,000
Shallow Water Ref. Co., Scott City	1,500	1,500	(†)
Shell Petroleum Corp., Arkansas City	20,000	19,000	19,000
Sinclair Ref. Co., Coffeyville	20,000	9,000	9,000
Sinclair Ref. Co., Argentine	11,000	7,500	7,500
Skelly Oil Co., El Dorado	23,000	17,000	17,000
Socony-Vacuum Oil Co., Inc., Augusta	20,000	18,500	18,000
Standard Oil Co., (Indiana), Neodesha	20,000	10,700	10,200
United Ref. Co., Russell	1,200	850	(*)
Vickers Pet. Co., Potwin	3,500	3,000	2,500
Total	204,850	145,900	141,650

*Shut down. †Under construction.

OKLAHOMA

Anderson-Prichard Ref. Corp., Cyril	6,000	4,500	4,500
Barnsdall Ref. Co., Barnsdall	6,000	3,500	3,500
Barnsdall Ref. Co., Okmulgee	10,000	4,000	4,000
Bell Oil & Gas Co., Grandfield	5,000	3,500	3,000
Black Gold Ref. Co., Oklahoma City	3,000	1,800	1,800
Champlin Ref. Co., Enid	16,000	9,100	9,000
Continental Oil Co., Ponca City	30,000	25,000	25,000
Cushing Ref. & Gasoline Co., Blackwell	1,700	1,700	1,700
Cushing Ref. & Gasoline Co., Cushing	6,200	2,500	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,600	2,500
Empire Oil & Ref. Co., Okmulgee	4,000	2,740	2,700
Empire Oil & Ref. Co., Ponca City	12,000	9,700	9,000
Globe Oil & Ref. Co., Blackwell	8,000	6,000	6,000
Johnson Oil Ref. Co., Cleveland	6,000	5,200	4,000
Knox Ref. Co., Covington	250	100	100
Mid-Continent Pet. Corp., West Tulsa	40,000	26,000	26,000
Ohio Oil Co., Bristow	5,000	3,000	2,835
Omar Ref. Co., Garber	4,000	3,000	3,000
Peppers Gasoline Co., Oklahoma City	500	450	450
Phillips Pet. Co., Okmulgee	6,500	5,480	5,660
Pure Oil Co., Muskogee	10,000	8,000	8,165
Pyramid Prod. & Ref. Corp., Oklahoma City	600	400	400

Company and location—	Daily capacity	Av. dly. runs— July	June
Rock Island Ref. Co., Beckett	6,500	3,200	3,200
Sinclair Ref. Co., Sand Springs	8,000	4,500	4,500
Sooner State Ref. Co., Oklahoma City	700	350	350
Sun Oil Co., Yale	5,000	2,000	2,000
Sunray Oil Co., Allen	8,000	3,550	2,800
Texas Co., West Tulsa	16,000	11,200	11,200
Tide Water Oil Co., Drumright	12,000	12,000	12,000
Triangle Prod. & Ref. Co., Oklahoma City	1,200	950	950
Vinita Ref. Co., Vinita	100	(*)	(*)
Wilcox Oil & Gas Co., Bristow	6,000	2,500	2,500
Total	259,250	177,520	174,310

NORTH LOUISIANA

Acme Ref. Co., Monroe	100	50	50
Arkansas Fuel Oil Co., Bossier City	25,000	20,000	20,000
Atlas Pipe Line Co., Shreveport	12,500	8,000	8,000
Bayou State Oil Corp., Hosston	750	450	600
Griswold Refs., Inc., Shreveport	1,000	(*)	(*)
Griswold Refs., Inc., Sandra	2,500	(*)	(*)
North Caddo Ref., Rodessa	1,000	600	600
Pelican Ref. Co., Converse	100	(*)	(*)
Rodessa Oil & Ref. Co., Cedar Grove	7,500	6,500	7,000
Shoreline Oil Co., Lewis	5,000	3,500	3,500
Stanolind Oil & Gas Co., Superior	5,000	4,000	4,000
Total	60,450	43,600	44,250

*Shut down.

SOUTHWEST TEXAS

Amsco Ref. Co., Mirando City	4,500	3,950	4,000
Humble Oil & Ref. Co., San Antonio	5,000	3,500	3,400
Imperial Gasoline Corp., Houston	4,000	750	750
Ina Oil & Ref. Co., Hondo	400	50	50
Fordyce Ref. Co., Sullivan City	1,000	700	300
Magnolia Pet. Co., Luling	8,000	5,900	5,800
Pettus Oil & Ref. Co., Pettus	1,000	800	800
Pettus Oil & Ref. Co., Mathis	1,000	800	800
Phoenix Ref. Co., San Antonio	1,200	1,000	1,000
Phoenix Ref. Co., Bruni	900	600	600
Pioneer Oil & Ref. Co., Somerset	2,000	900	900
Rado Ref. & Prod. Co., McAllen	800	500	500
Ranne Ref. Co., San Antonio	1,000	500	500
Texas Co., San Antonio	3,000	2,800	2,800
Valley Ref. Co., Harlington	1,000	700	700
Total	34,800	23,450	22,900

EAST TEXAS

Beacon Oil & Ref. Co., Henderson	4,500	140	440
Cascade Ref. Co., Reed Switch	3,000	1,600	2,160
Clay Ref. Co., Arp	3,500	3,040	2,920
Danciger Refs., Inc., Longview	10,000	5,500	6,500
East Texas Ref. Co., Longview	10,000	7,500	7,300
General American Ref. Co., No. 1, Gladewater	4,000	3,000	(*)
Hurricane Pet. Corp., Overton	5,000	3,580	2,700
Hurricane Pet. Corp., Arp Ref., Arp	3,750	2,550	2,410
Lacy Ref. Co., Kilgore	3,000	2,340	370
Magnolia Pet. Co., Corsicana	5,000	3,500	3,500
Master Pet. Co., Waco	1,000	(*)	(*)
Ocean Pet. Corp., Kilgore	3,000	(*)	1,000
Premier Oil Ref. of Texas, Willow Springs	4,500	3,000	3,000
Paluxy Asphalt Co., Talco	5,000	4,000	4,000
Panama Ref. Co., Kilgore	3,000	(*)	(*)
Seltex Ref. Co., Gladewater	3,000	1,100	1,310
Sinclair Ref. Co., Camp Switch	3,500	3,100	2,000
Solvex Refs., Inc., Gladewater	4,500	3,000	3,000
Southport Pet. Co., Kilgore	5,000	3,000	3,000
Talco Asphalt & Ref. Co., Mt. Pleasant	5,200	2,100	(†)
Texas Co., The, Dallas	16,000	8,000	8,000
Tower Ref. Co., Overton	3,000	2,420	2,740
Total	108,450	62,470	56,350

*Shut down. †Under construction.

NORTH CENTRAL TEXAS

Allstate Ref. Co., Thrall	2,500	(*)	(*)
Baird Ref. Co., Baird	1,500	1,300	1,200
Coleman Ref. Co., Coleman	750	300	300
Continental Oil Co., Wichita Falls	6,000	4,245	4,700
Crown Oil Co., Fort Worth	1,000	(*)	(*)
Exchange Pet. Corp., Albany	800	300	350
Falls Ref. Co., Wichita Falls	2,000	300	300
Gainesville Ref. Corp., Gainesville	1,800	1,500	1,500
Gratex Ref. & Fuel Oil Co., Graham	300	290	290
Gulf Oil Corp., Fort Worth	8,000	7,200	7,200
Hightower Oil & Ref. Corp., Brownwood	750	100	100
Jacksboro Ref. Co., Jacksboro	250	50	50
La Salle Pet. Co., Burkburnett	3,500	850	850
Magnolia Pet. Co., Fort Worth No. 1	12,000	6,200	6,200
Midway Ref. Co., Coleman	300	150	150
Norgold Ref. Co., West Olney	500	200	200
North Texas Oil & Ref. Co., Gainesville	600	300	300
Ohio Oil Co., Fort Worth	5,000	4,400	4,330
Olney Oil & Ref. Co., North Olney	3,000	1,800	2,000
Panhandle Ref. Co., Wichita Falls	4,200	3,000	2,800
Panhandle Ref. Co., Lueders	1,000	850	800
Pilot Point Ref. Co., Pilot Point	500	(*)	(*)
Sinclair Ref. Co., Fort Worth	5,000	3,000	3,000
Southland Ref. Co., Megargel	500	200	200
Taylor Ref. Co., Taylor	6,000	1,000	1,000
Taxman Ref. Co., Wichita Falls	3,250	3,000	3,000
Texas Pacific Coal & Oil Co., Caddo	1,000	700	700
Tucker Ref. Co., Wichita Falls	250	200	175
Tydal Ref. Co., Gainesville	1,850	1,750	1,800
Wagoner Ref. Co., Electra	6,000	4,200	4,200
Total	80,000	47,285	47,695

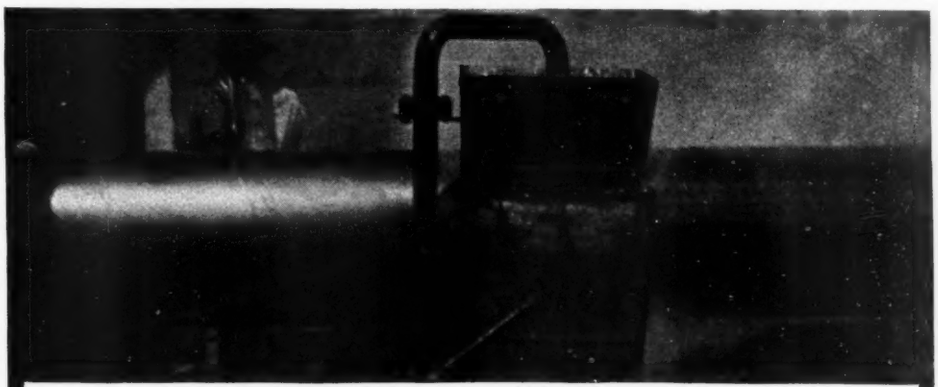
*Shut down.

WEST TEXAS AND PANHANDLE

Aero Gas Ref. Co., Pecos	225	100	100
Coltex Ref. Co., Colorado	12,500	8,000	8,000
Concho Ref. Co., San Angelo	250	100	100
Cosden Oil Co., Big Spring	12,500	9,500	9,500
Danciger Refs., Inc., Pampa	6,500	5,500	6,500
Danube Oil Corp., Borger	400	400	250
Gibson Oil Corp., Magic City	250	150	150
Gulf Oil Corp., Sweetwater	7,000	5,300	5,610
Howard County Ref. Co., Big Spring	2,000	1,000	700
Moutray Oil Co., Hawley	1,200	1,200	1,100
Onyx Ref. Corp., Hawley	2,000	1,400	1,200
Panhandle Ref. Co., Kings Mill	2,500	1,850	1,800
Phillips Pet. Co., Borger	50,000	23,400	24,150
Sageland Ref. Co., Sweetwater	1,000	500	500
Shamrock Oil & Gas Corp., Sunray	2,500	1,500	1,500
Shamrock Oil & Gas Corp., Meldavis	1,600	1,700	1,700
Stamford Ref. Co., Stamford	300	275	270
Standard Oil Co. of Texas, El Paso	14,000	10,000	9,700
Starlight Ref. Co., Ballinger	500	200	200
Texas Co., El Paso	2,000	1,300	1,300
Texas Co., Amarillo	6,000	3,100	3,100
West Texas Ref. Co., Pecos	6,000	1,600	1,600
Western Ref. Co., Mertzon	1,000	400	400
West Texas Oil & Ref. Co., Sweetwater	60	40	40
Wickett Pet. Co., Wickett	2,500	1,500	1,500
Total	126,985	80,015	80,970

Oil and Gas Royalties Drop

BATON ROUGE, La.—The Louisiana state land office has announced that oil and gas royalties from lands leased by the state to private operators brought into the state a total of $144,622.97 during June. This compared with $183,246.97 for the month of May.



Metal pipe being coated by our new machine at Palmer, Kan., where 20 miles of 20" pipe were coated for Northern Natural Gas Co.

MACHINE-COATING on-the-Job

assures perfect protection

for **OIL** *and* **GAS** **PIPE LINES**

At last! A machine-coating method — carried on in a yard shop set up near the right-of-way —that overcomes every difficulty formerly encountered in the field. Through the use of a new procedure and a new machine, designed by us, we are able to assume undivided responsibility for perfect pipe protection—handling every step of the work from manufacture of the coating to application on the job . . . and even the field joints.

"Production line" technique is used. Coating progresses faster than laying. Field hazards are eliminated, weather delays minimized. Bitumastic Enamel is applied in consistent thickness; no waste, drips, runs or festoons. Coating alone, or with bonded or unbonded felt wrapping, or with Cem-Wrap cement mortar is handled as one continuous operation. Work is thorough—coating field joints is included. An electric holiday detector, in the yard and in the field, makes certain that the coating is intact when pipe line is back filled.

The laying contractor is freed from any responsibility regarding coating application and will suffer no delays.

You can get this method of machine-coating in just one place—from the only manufacturer whose products have been in actual service on pipe lines long enough to prove their dependability. Yard shops set up anywhere for this economical . . . on-the-job . . . machine-coating.

No Other Coating Has Been In Use As Long As **BITUMASTIC** No Other Equals Its Performance Record

REG. U.S. PAT. OFF.

THERE IS NO SUBSTITUTE FOR EXPERIENCE

WAILES DOVE-HERMISTON CORPORATION

BOSTON PHILADELPHIA CLEVELAND CHICAGO TULSA SAN FRANCISCO LOS ANGELES

17 BATTERY PLACE, NEW YORK, N. Y.

INDEPENDENCE

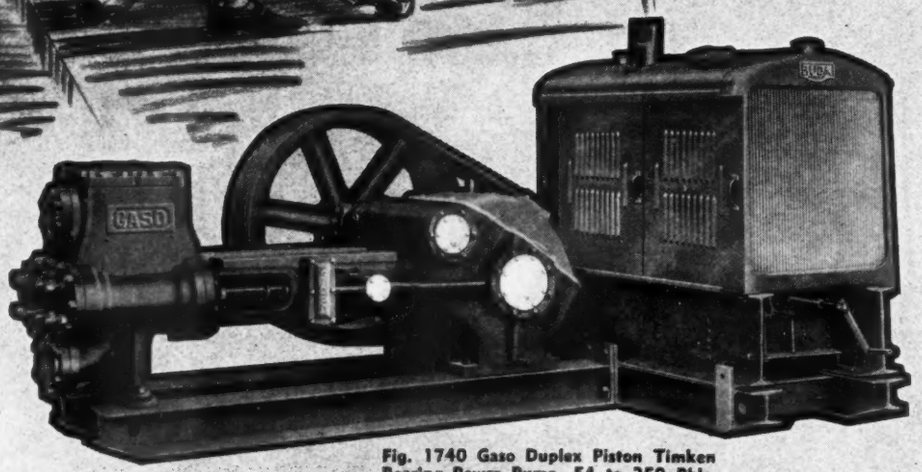


Fig. 1740 Gaso Duplex Piston Timken Bearing Power Pump, 54 to 250 Bbls.

● Drawn by Thomas Jefferson and signed by the American Continental Congress on July 4, 1776, the Declaration of Independence is one of the most important documents of all time.

Every year more and more oil companies sign their own Declaration of Independence from pump troubles by the simple procedure of standardizing on GASO Pumps, made in the heart of the oil country by men who know the rigors of oil-industry conditions. Have you a copy of our catalog? . . . Gaso Pump & Burner Mfg. Co., Tulsa, Okla. Export Office: 149 Broadway, New York.

Complete Gaso Condensed Catalog, in 1937 Composite Catalog

GASO PUMPS

for every oil industry need

FIELD OPERATIONS

Summarizing the Week's Developments

The Rodessa extension into Miller County, Arkansas, will be rapidly drilled. Three permits were granted for wells on plots less than 10 acres each. The discovery well, good for over 2,500 bbls. a day, is pinched to 500 bbls. a day. A Woodbine sand pool was opened in DeSoto Parish, Louisiana, 7 miles northwest of Pleasant Hill, and the discovery well gauged 184 bbls. in 12 hours, with 7 per cent salt water. The possibility of Travis Peak production in Rodessa, Cass County, at 7,012 feet is indicated by the coring of saturated sand.

TEXAS

The new Lundell field in Duvall County, Texas, was opened by a 100-bbl. well at 1,518-28 feet, Cole sand. The discovery well in the Luby field, Nueces County, is again on production and made 156 bbls. per day, total depth 5,050½ feet. The North Sweden field, Laredo district, was extended by a 265-bbl. well 1 mile south of other production. Two McMullen wildcats are showing oil and gas. In Guadalupe County a well estimated good for 100 bbls. per hour came in at a total depth of 2,395 feet, 113 feet below the Austin Chalk. In the Gulf Coast area the Harris County discovery in the Friendswood area looks so good that big prices are being paid for acreage near it. It flowed 600 bbls. in 24 hours through a quarter-inch choke at a plugged back total depth of 6,009 feet. Two important wildcat locations have been made in Chambers County. On the Louisiana side of the Coastal fields the Lafitte pool was extended and the Plaquemines Parish test on the Venice Salt dome will be tested this week. It looks favorable, with 21 feet of oil sand at a total depth of 7,208 feet. Eight new wells were completed in the Talco pool. East Texas completed only 34 oil wells and two dry holes. In West Texas 13 wells averaging 1,044 bbls. per well were completed in Winkler County and 17 wells averaging 585 bbls. per well were brought in in Ector County. The new Avoca pool in northeastern Jones County already has additional wells drilling.

KANSAS

The Bemis pool in Ellis County, Kansas, was extended eastward by a 864-bbl. well in section 15-11-17w that pumped 864 bbls. in eight hours.

OKLAHOMA

The Jesse pool in Pontotoc County, Oklahoma, was extended northeasterly and northwesterly. The Billings pool was extended westward and a Hunton lime well on the west side of the Fitts pool started at the rate of 3,960 bbls. a day through 2-inch tubing.

CALIFORNIA

The Wilmington field in Los Angeles Basin, California, is producing 40,600 bbls. a day out of a potential of 86,000 bbls., and 48 wells are actively drilling while 61 other locations are occupied by derricks and rigging up operations, promising an orgy of drilling.

MICHIGAN

A 3,000-bbl. well, and another good for 2,600 bbls., were the best of the week's crop in the Buckeye field in Gladwin County, Michigan.

Completions in All Fields

(Week Ending July 10, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	73	20	9	102	2,056	1,550
Ohio	8	16	10	34	585	368
Indiana	3	0	4	7	49	89
Kentucky	7	5	1	13	286	117
Illinois	4	0	0	4	41	23
Michigan	19	0	0	19	440	369
Kansas	28	0	13	41	1,260	846
Oklahoma	32	2	6	40	1,501	1,344
Texas:						
North Central Texas	22	0	25	47	1,509	1,479
West Texas	55	0	7	62	1,378	745
Texas Panhandle	14	8	0	22	370	359
East Texas	34	0	2	36	1,136	1,461
East Central Texas	10	1	1	12	371	144
East Texas Border	8	1	5	14	218	36
Gulf Coast Texas	17	2	8	27	774	619
Southwest Texas	60	1	23	84	1,726	1,477
Total Texas	220	13	71	304	7,482	6,320
North Louisiana	6	5	3	14	357	358
Gulf Coast Louisiana	10	0	3	13	249	212
Total Louisiana	16	5	6	27	606	570
Arkansas	0	0	2	2	67	49
Montana	5	0	0	5	96	102
Wyoming	1	0	0	1	49	45
Colorado	0	0	0	0	6	16
New Mexico	15	0	3	18	402	290
Utah	0	0	0	0	1	5
California	20	0	5	25	789	591
Total United States	451	61	130	642	15,716	12,694
Total previous week	464	54	118	636		
Difference	13	7	12	6		

Outstanding Fields—Highlights

(Week Ending July 10, 1937)

Field—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Amelia	5	12	3	1,894	72	5,137
Hastings	3	18	7	3,878	226	14,437
Flour Bluff	0	6	0	.....	60	4,500
Saxet	6	35	7	910	483	39,750
North Sweden	0	12	5	960	13	940
East Texas	44	144	34	1,482	23,060	474,800
Talco	7	41	8	3,010	376	30,198
Ector County	15	100	17	10,056	486	24,000
Winkler County	12	61	13	13,568	1,312	44,700
OKLAHOMA						
Oklahoma City	1	6	4	14,445	1,130	149,150
Fitts	8	48	5	2,885	797	85,450
Olympic	0	6	1	20	385	13,450
KANSAS						
Ellis County	7	35	2	862	129	8,230
Reno County	3	25	3	3,702	448	18,695
Russell County	8	63	12	16,339	748	30,505
Rice County	9	63	11	11,649	903	45,170
NEW MEXICO						
Lea County	15	85	14	4,396	2,242	112,750
LA-TEX-ARK						
Rodessa, Ark.	R	4	0	.....	1	510
Rodessa, La.	3	15	3	290	388	48,250
Rodessa, Tex.	1	21	4	1,020	306	37,535
Lisbon, La.	9	13	3	1,490	49	12,590
Schuler, Ark.	3	15	0	.....	4	1,500
MICHIGAN						
Buckeye	12	93	13	8,470	155	13,244

Southwest Texas District

By GEORGE WEBER

ADD SIXTY NEW OIL WELLS IN UNUSUALLY ACTIVE WEEK

HOUSTON, Tex., July 12.—Well completions ran high the past week in Southwest Texas. New discoveries were lacking, and the principal developments were those carried over from the discoveries of the previous week. Failure of a few wildcats and field outpost tests brought disappointment in some sectors, but the large volume of well completions and new locations point to considerable activity both in proven and wildcat locations during the next few weeks.

Another flush producer was completed in Guadalupe County to again attract attention to the activity in that section. Two McMullen County wildcats are showing oil and gas. Duval and Nueces counties each gained new oil fields as previous wildcat shows materialized as producers. Flour Bluff and North Sweden, two of the most actively developing fields, failed to be extended when two important wildcats showed unsuccessfully, and new sands are being watched in tests in Nueces and Jim Wells counties.

The new Duval County field, unofficially named the Lundell field, was opened during the week, as the Government Wells Oil Co. No. 2 Lundell came in making an initial of 5 bbls. per hour. The discovery well is producing from the Cole sand at 1,518-28 feet, the same body which produces in the Piedra Lumbre field to the north. The Government Wells field 1¼ miles to the east of the new discovery shows salt water in the Cole sand on the west edge. Magnolia Petroleum Co. has staked a new location in the field for an early test of its productive limits.

The No. 2 Lundell is located 1,200 feet southwest of No. 1 which produced gas from the same Upper Cole series.

Nueces County's new field, named the Luby several weeks ago, was again producing, as the discovery well, Seaboard Oil Corp. No. 1 Luby made 156 bbls. per day on a three-sixteenths inch choke. Pressures on the tubing and casing were recorded at 1,500 and 1,710 pounds respectively. The well was originally completed through perforations at 5,045-50 feet, but operators plugged it to rework and combat an increasing gas oil ratio and higher pressures. The well is now producing through perforations at 5,048½-50½ feet. An east offset to the No. 1 Luby, No. 1 Schaeffer, is waiting on cement with surface casing set.

Laredo District

In the Laredo district, the North Sweden field was extended as expected by the completion of the Standard Oil Co. of Kansas No. 1 Parr. The outpost test, located 1 mile south of production in the field, was brought in making 265 bbls. per day through a three-sixteenths inch choke. The sand was cored at 4,738-43 feet. Besides extending production in the newly developing field, the test opens a new sand, which is said to produce gas in the field proper to the north.

In addition to the new Standard Oil Co. well, four other producers were completed, headlining North Sweden as the most active section of the Laredo district. Those anticipating a southwest extension as a result of success in the Navarro Oil Co. No. 1 Rossi, however, were disappointed, for the test has missed the field sand and is tied up on a fishing job at 6,161 feet at latest reports. Likewise, the King Drilling Co. No. 1 Parr, located 1 mile east of the field, has missed the sand and has been coring below that level for several days.

To the southwest in Webb County, the Killam field is attracting new activity, although results of the week's drilling were mixed, with one oiler and one dry hole. The shallow field is producing from the Mirando sand at 2,000 feet.

McMullen County, famed wildcat area for independent operators, has two wildcats within its boundaries, which are showing oil and gas. Edwards, Zock and others No. 1 Two Rivers Ranch, located about 2½ miles southeast of Wentz, cored sand at 1,100-02 feet where a show of oil and gas was encountered. The test is being cored ahead.

On the Shiner ranch, the C. C. Shumway No. 10 has a sand at 1,575-84 feet. Casing was being set at latest reports.

Jim Wells County's current important wildcat is Magnolia Petroleum Co. No. 7 Seeligson. The test, located 4 miles southeast of Ella, and 1 mile west of the Kleberg County line has been testing a number of sands encountered in the past few weeks. This week, a drill stem test at 6,005-17 feet showed recovery of 35 feet of distillate at a working pressure of 700 pounds. Another test made at 6,076-89 feet recovered 45 feet of mud cut with distillate, and a working pressure of 750 pounds. The test is coring ahead below 6,100 feet.

The first outpost test to be drilled in the Flour Bluff section of Nueces County was a failure this week. The J. K. Culton No. 1 Singer, located on Lot 13, Block 39 of the Encinal Gardens Subdivision, 2 miles south of the field, recovered salt water in the field sand and was abandoned at total depth of 7,010 feet. The sand cored at 6,620-70 feet had a show of oil and gas, but upon drill stem test, flowed 3,600 feet of salt water. It is located on the same neck of land as the field, adjacent to Oso Creek.

In the Flour Bluff field, proper, several new tests are under way. A large number of completions last week brought a mass movement to five new locations. The field is being gradually extended to the water bottom on the east and west edges of the peninsula.

In the Sullivan district of the Agua Dulce field of western Nueces County, high pressures encountered at 7,032-52 feet almost caused a blowout in the Lockhart Bros. No. 1 Purl. The sand showed high pressures in the United Production Co. No. 1 Harvey, same area. In the Purl test, the drill stem was stuck when the well attempted blowing out, and operators are attempting to loosen it after killing the well.

The United test has been on sand topped at 7,336 feet for several weeks, attempting a completion and discovery well of a new horizon. At latest reports they were resuming operations after a short shutdown. The same operators are drilling below 6,200 feet in the No. 3-A Rivers, 1,998 feet southeast of the No. 1 Harvey, and the No. 1 Schroeder is drilling plugs in surface string set at 1,510 feet. In the same field, Conroe Drilling Co. is drilling below 3,500 feet on No. 1 Hagen & Stewart.

Another Saxet Sand

Another sand horizon was opened to production in Saxet during the week, as the Donico Production Co. No. 7 Donigan came in for an initial production of 196 bbls. per day. The sand was cored in the same operators' No. 9 Donigan, but that test was carried to the 4,400-foot Clarkwood sand and completed for 162 bbls. per day. Both tests are located in the southeast section of the Saxet field.

Two new producers, Morgan & Chapman Minerals Corp No. 7 Morgan and Baltic Drilling Co. No. 6 Harmon were completed in the field's deep 6,700-foot sand. Other completions were in the 5,800-foot Frio sand, and the Clarkwood sands at 4,400 feet and 4,500 feet.

San Patricio County fields are seeing an upturn in activity. The newly discovered Midway field, extended nearly a mile to the north last week, is gaining two new tests, and to the north, four new tests are beginning in the Plymouth field.

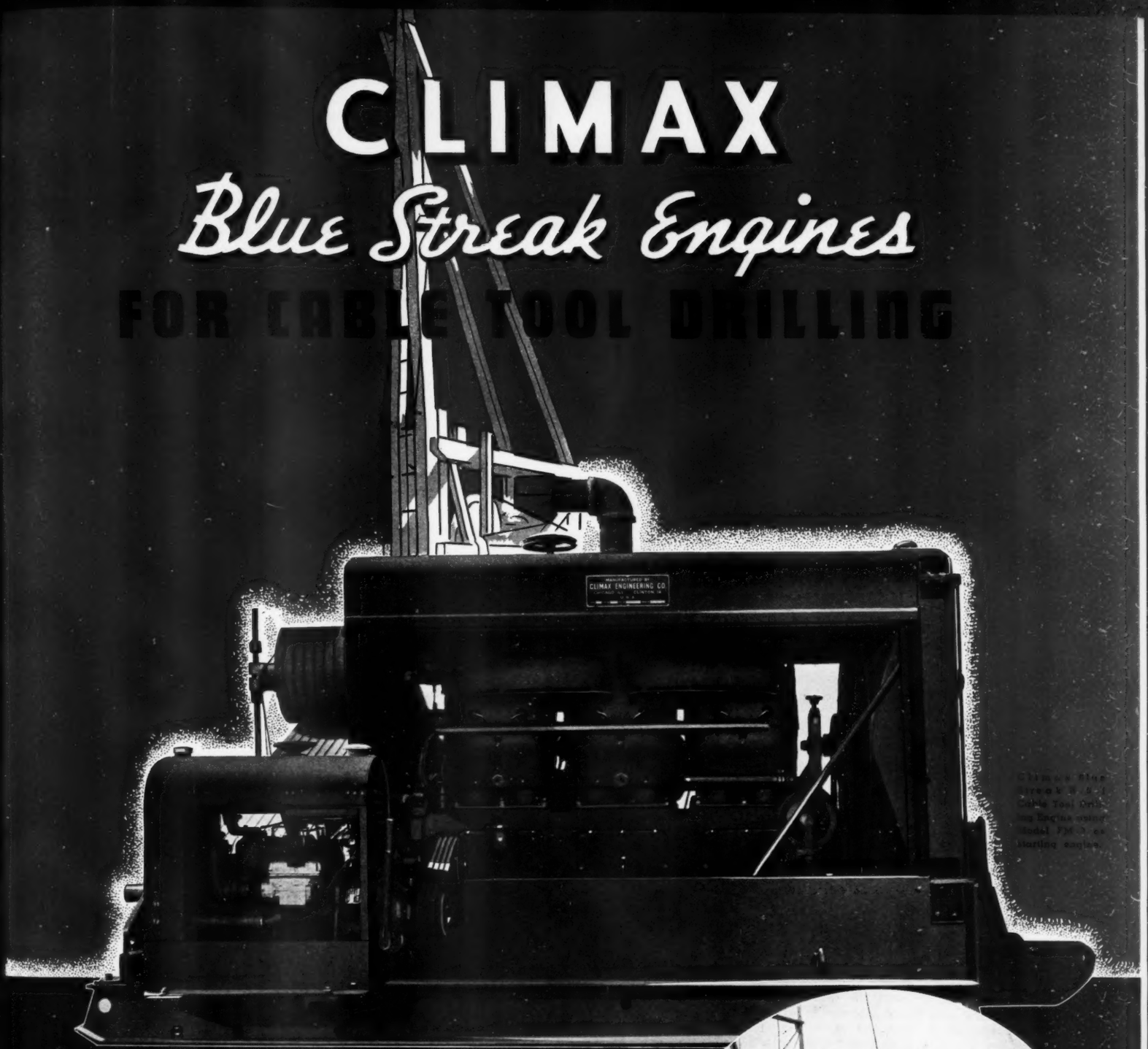
Flush production again rewarded operators in the Guadalupe County sector of the Fault Line zone this week, when the Ramona Oil Co. No. 3 Lay came in making an estimated 100 bbls. per hour. The test is bottomed at 2,395 feet, and cored Austin chalk at 2,292-2,383 feet. The test, located in the southwest extension of the Darst Creek field, came in flowing an estimated 5,000 bbls. per day, but was choked down to the 100-bbl. per hour rate after filling available storage. It is the largest producer to have been completed in the extension, but is typical of wells in the Fault Line zone. Guadalupe and Caldwell counties constitute one of the busiest drilling sectors in Southwest Texas at the present time.

These big ones of J. E. Crosbie, Inc., make the wheels go around in that thriving company. Front row: A. W. Dwen, general superintendent, Tulsa; W. B. Moran, vice president, Tulsa; D. B. Young, plant superintendent, Fittstown, Okla. Back row: Dwight Dodson, plant superintendent, Okemah, Okla.; E. D. Egleston, plant superintendent, Holdenville, Okla.

CLIMAX

Blue Streak Engines

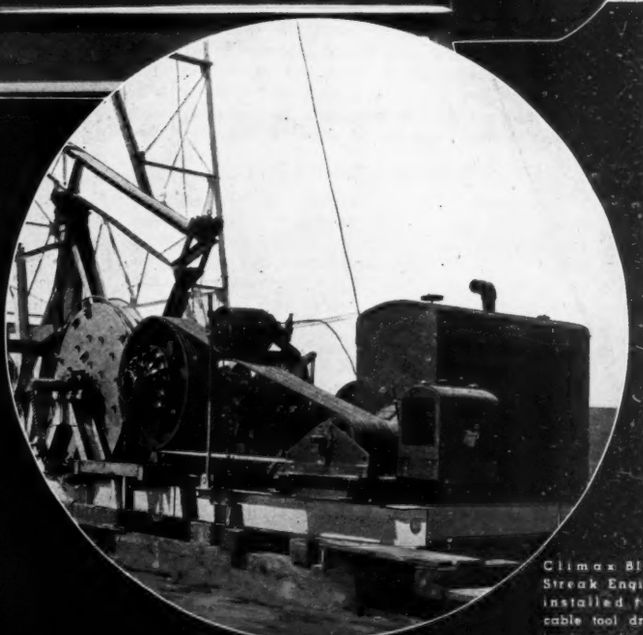
FOR CABLE TOOL DRILLING



Ten per cent MORE horsepower, twelve per cent LESS fuel consumption, remarkable torque characteristics — all are typical of Blue Streak Engine performance and the direct result of Blue Streak combustion.

Especially adaptable for cable tool work, with wide flexibility required for both pulling tools and drilling, together with dependability and low upkeep cost — Climax engines have been universally accepted in the oil country as a popular prime mover

Ask any Continental representative for complete information.



Climax Blue Streak Engine installed for cable tool drilling in service.

THE CONTINENTAL SUPPLY COMPANY

General Offices: DALLAS, TEXAS

Export Office: CONTINENTAL EMSCO CO., Inc.
30 Rockefeller Plaza New York City, N. Y.

Representatives:
LONDON MARACAIBO PLOESTI BUENOS AIRES

"Serving the Oil and Gas Industries"

CONTINENTAL

Michigan Field Report

3,000-BARREL WELL THE BEST OF 13 BUCKEYE COMPLETIONS

By
O. C. PRESSPRICH

SAGINAW, Mich., July 12.—As Michigan oil interest focused on the midway Buckeye field, destined eventually to connect the Wicklund and Oard pools in Gladwin County, Arenac County came to the front this week with several favorable producers, while Montcalm and Isabella counties showed a little activity to force Buckeye to share the spotlight on Michigan's oil production. Clare County, with no show of oil to date, but with a few gassers, continues to experiment with gas tests. Most interest, however, centers in Buckeye Township, Gladwin County, for the newly discovered pool in Allegan County failed to develop any additions to its 10 producers, although several tests were due to come in soon.

While completions in the north Buckeye field (Wicklund pool) and the south field (Oard pool) continued to be taken for granted, operators focused on results of drilling in the midway Buckeye pool this week as the only section where it remained problematical of striking a producer. Another week was expected to result in determining the actual possibilities of the midway field, launched by the George Hanners "Tattletale" well in section 23 about six weeks ago, with three tests in the undetermined field due to hit pay soon.

Grouped about the Hanners discovery well are two offsets ready to be brought in momentarily. Smith Petroleum Co. No. 1 Chovick, an eastern offset of the Hanners well, was casing late this week at 3,450 feet. The well is in NW NW SE section 23, one location east of the Hanners well.

Another offset in SE SE NW section 23 was Beaver Trust No. 3-A Armstrong, a north offset of Hanners, which was running casing preparatory to topping the pay sand. These two wells in the "Tattletale" area of the midway field will determine definitely the actual worth of the field, and operators would be quick to divert their attention elsewhere should either or both prove a failure.

Further to the westward in the midway pool, in a wilderness untouched by derricks, Archie M. Henry No. 1 DeMuth SE SW SW section 22, topped the Dundee at 3,578 feet late in the week. The well was reported 70 feet in the Dundee with approximately 10 feet to go before the expected pay would be reached. The Henry test is a wildcat on a plane with Hanners' original "Tattletale," as it spudded in in a section totally unproved, and far removed from producers.

Wicklund (North) Pool

Developments of the week in the Wicklund and Oard pools showed little except to establish more definitely the prolific nature of Michigan's leading pool. With boundaries being established at least on the north and east sides of the Wicklund pool, operators indicate a trend westward, with plenty of unproved territory in which to set rigs.

The south (Oard) pool topped the Wicklund field in developments of the week, at least in number, if not in potentials. Seven wells were completed in the south pool and six in the north. Initial production of the north pool wells, however, topped the production of their southern neighbors. While the number of completions for the week was relatively small, due to a general close down over the July 4 holiday, a number of wells were preparing to drill into the pay as the week ended.

Top honors for the week's producers went to Rex Oil & Gas Co. No. 4-A State, SE NE SE section 11, with a gauge of 125 bbls. hourly for a potential of more than 3,000 bbls. daily. The Rex well is reported to have exceeded 100 bbls. in the first hour. The well was completed at 3,630 feet, into the Dundee 15 feet. This type well felt the full force of the proration curb of 150 bbls. flat allowable daily, with the added mechanical and market difficulties also to be considered.

Sun Oil Co. followed the Rex well closely when its No. 7 Salla, NW NW NW section 11, initialed an estimated 2,600 bbls. daily. The Salla well was bottomed at 3,625 feet, or 94 feet into the Dundee sand.

Beaver Trust No. 1 Thompson, NW NW NW section 14, another north pool venture, reported an initial of 800 bbls. daily at 3,640 feet, 86 feet below the Dundee top.

Wicklund Development Co. reported two small producers, No. 2-A Campbell, SE NW NW section 12, and No. 4-A Campbell, NE NW NW section 12. No. 2-A made 150 bbls. after acid, and No. 4-A, three locations north, made 20 bbls. daily after acid, but with water reported in the hole.

South (Oard) Pool

Among the top producers in the southern Oard pool was Garfield Petroleum Co. No. 2 McMahon, NE SW SW section 36, which initialed 400 bbls. Bottom was reported at 3,580 feet. Slightly ahead of the Garfield well in production was Clark & Johnson No. 6 McMahon, SW NE SW section 36, which initialed 450 bbls. naturally. The Clark & Johnson well is located just south of the Garfield producer.

Rex Oil & Gas Co. No. 1 Foster, NW SW SE section 26, was being deepened after showing 2,000 feet of oil in the hole at 3,590 feet. Officials believed that the well would make about 400 bbls. after acid and deepening. Favorable production by this well would extend materially westward the development of the north part of the south (Buckeye) pool, as to date the Rex venture is the most westerly in that particular territory. It also would bear out the northwesterly and southeasterly trend of pay formations.

Awaiting acid treatment this week was Gordon Oil Co. No. 1 Trego, NE SE NE section 35, another western edge test in the south part of the field, which initialed 150 bbls. naturally at 3,585 feet.

Schelling & Schrott No. 1 McMahon, SW SE SE section 36, the most southeasterly well in the entire Buckeye field, reported an initial of 150 bbls. daily. The test was in reality a wildcat, being far removed from producers in the extreme southeast part of Buckeye Township.

Another venture of the same company, its No. 1 Nash, SE NW SE section 35, a western extension of the Oard pool, also initialed 150 bbls., giving this company honors for the week for development of boundary wells which showed favorably among the interior well developments.

What may be another westward extension of the south pool is the Naumes, Simon & Voorhies No. 1 Santa, SE NE SW section 35. A show of oil developed below the 3,500-foot level, and operations are shut down while the hole is being cased. The well is two locations west of Schelling & Schrott No. 1 Nash.

Rowmor Corp. No. 2-A State, SW NW NE section 36, was plugged back 3 feet from a depth of 3,633 feet and gauged 175 bbls. daily after acid treatment.

Arenac County

Deepening is planned for the No. 2 Peavy, NW SW SE section 4, in Clayton Township, Arenac County, in attempts to increase its 2,000-bbl. daily production. The well, owned by Devonian Oil Co., has a total depth of 2,413 feet, only 9 feet in the pay formation, which was found higher in No. 2 than in No. 1, of which it is the west offset. Operators are hopeful that deepening will serve to bring a material increase in the flow.

Three other completions were recorded the past week in the Clayton pool, discovered less than a year ago. A break of 4 cents a barrel in the price of Arenac crude, from $1.26 to $1.22, has failed to dampen the spirits of operators in that sector, who feel that the marketing situation soon will right itself and see Arenac crude back up to what they consider its normal price level.

Weber Oil Co. has finished acidization of its No. 3 Whiting, NE NE NE section 10, to rate 450 bbls. daily. No. 2 Keef of Great Western Petroleum Corp., SE SE SW section 3, took the acid and came back with a flow of 400 bbls. daily. McClanahan Oil Co. still is testing its No. 1 Buffalo Land, SE NE NW section 10, after acid treatment had produced an oil flow of slightly more than 50 bbls.

In Adams Township, Arenac County, E. H. Linsberry, who a week ago reported that his No. 1 McTaggart wildcat, SE NE SE section 36, had found the Traverse structure higher than in the two T. F. Caldwell wells 4 miles to the south—one of which has been producing from the Traverse lime for almost 18 months, the other being plugged and abandoned a short time ago—credited his test with a showing of oil, a bailerful an hour, at last reports. Drilling will be continued in the hope of commercial production.

Tobacco Township—Gladwin County

Across the southern boundary line from the Oard pool in Buckeye, development continues in Tobacco Township. McClanahan Oil Co. brought in its No. 1 Johnson, NW NW NW section 1, with an estimated flow of 250 bbls. daily. The well is to be acidized. An important test in the Tobacco field is Sun Oil Co. No. 1 Rise, NE NE NE section 2, a west offset of the McClanahan well. The well was reported to be cutting water, and operators said a failure on this well would clearly define the limits of the Tobacco Township pool, believed to be a "hangover" from the prolific Buckeye pool.

Montcalm County

Confirmation of an oil strike late last fall in Winfield Township, Montcalm County, was made July 8, when Gaylord Norton No. 1 Eghotz, SW SW SE section 20, came in with an estimated 100 bbls. a day. The well picked up a pay at 3,346 feet, believed to be the Monroe formation, with the Dundee top logged at 3,238 feet. After striking pay, operations were suspended until tankage could be provided. A large amount of gas accompanied the flow. The test will be deepened with expectations of a larger output.

Isabella County

Isabella County's Sherman Township field rated one completion the past week, McClanahan Oil Co. No. 2 J. W. Embrey, SW SW SE section 33, further extending the southern boundary of the field. The Embrey was completed at a depth of 3,622 feet with a daily natural initial of 110 bbls. Operators expect to acidize the well soon in an effort to increase the flow.

Clare County

From Lincoln Township, Clare County, comes news that James A. Pierce will drill in the No. 1 Mortenson gas test, C SW section 9, within the next few days. The structure was found at a good level, running slightly higher than previous tests had indicated, and drillers are hopeful of a well of sizable proportions.

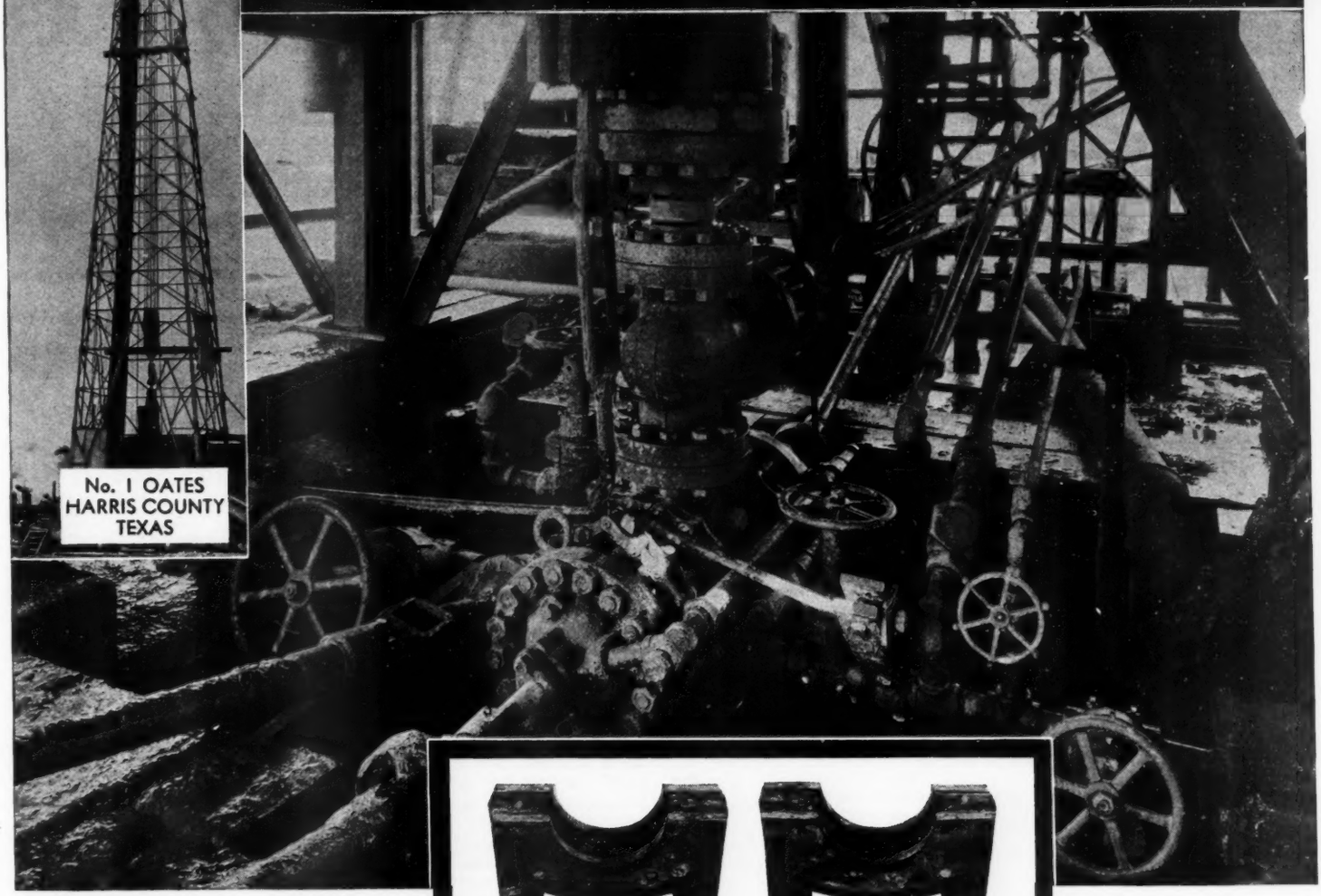
Clare County still is a blank as far as oil is concerned, but has several gas producers to its credit.

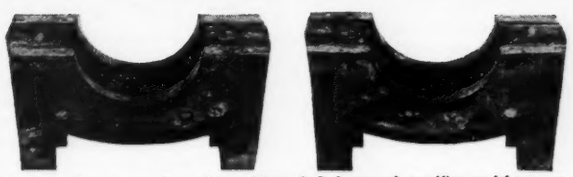
Wildcat Tests

Four of the 10 drilling permits issued the past week by the Michigan department of conservation are for wildcat tests in previously unexplored territory as widely separated as Mackinac and St. Clair counties.

(Continued on Page 109)

3½" OD DRILL PIPE ROTATED EIGHT HOURS UNDER PRESSURES AS HIGH AS 2900 POUNDS THROUGH CAMERON 7" TYPE SDA PREVENTER





These are the two packers that withstood 8 hours of terrific punishment on No. 1 Oates. Despite wear, each packer held 2900 pounds well pressure at the end of the period of rotation.

CONVINCING evidence of the ability of Cameron Self-feeding Ram Packing Elements to absorb terrific punishment due to movement of drill pipe through the closed rams was provided recently on No. 1 Oates, Harris County, Texas.

At approximately 8700 feet, abnormal bottom hole pressures, estimated to be more than 7000 pounds, developed in the 700 feet of open hole below the 8000-foot oil string. Circulating fluid weighing 17½ pounds proved barely sufficient to hold well pressure when in good condition, and insufficient when cut by salt water which intruded.

In an effort to prevent sticking 3½" O.D. drill stem, pipe was rotated continuously through the closed rams of the 7"-5000 pounds test Cameron Pressure Operated Blowout Preventer for a period of eight hours. For six hours, 400 pounds fluid closing pressure was maintained behind the rams of the Cameron Type SDA Preventer. As surface pressure continued to build up, once as high as 2900 pounds, it was necessary, during the last two hours, to apply 800 pounds fluid closing pressure.

Inasmuch as there was no means of repacking the one Cameron Type SDA Preventer on the well, it was deemed inadvisable to continue pipe rotation after eight hours. As shown above by the unretouched photograph of the two worn Cameron Self-feeding Ram Packing Elements, which held perfectly at the end of the period, the resilient packing in these elements positively does feed out as required. Further, their capacity to withstand the wear and tear imposed by eight hours of pipe rotation under pressure clearly reveals why they effect an immediate and positive seal when closed under normal conditions.

Operators interested in obtaining the most dependable control equipment possible should, by all means, give full consideration to the correct type of Cameron control unit or hook-up to meet their requirements.

CAMERON IRON WORKS, INC.

711 MILBY STREET, HOUSTON, TEXAS

EXPORT OFFICE: 74 Trinity Place, New York, N. Y.
MIDLAND: W. P. (Red) Knight
CORPUS CHRISTI: J. M. (Red) Teague
LOUISIANA: Pelican Well Tool & Supply Company
OKLAHOMA and KANSAS: Carson Machine & Supply Co.
MEXICO: J. W. Allen, Apdo. 542, Tampico, Tamps.

Eastern Field Report

By STAFF CORRESPONDENT

FAYETTE COUNTY WILL HAVE ANOTHER DEEP TEST FOR GAS

PITTSBURGH, Pa., July 12.—Preparations are under way for another test of the Chestnut Ridge in North Union Township, Fayette County, Pennsylvania. Harold F. French, Frank Fairman, Howard A. Barker, Thomas B. Hunt and others are moving in material for a test on the Louisa Varndell tract which is scheduled for the lower Devonian. It is just east of the Jumonville Road about three-quarters of a mile north of the junction of that road and the National Highway or Route 40. The test on the Summit Hotel property is on the south side of the National Highway about 300 feet west of that junction and it is producing gas from the Onondaga limestone at 6,667½ feet.

The second test of the Potter Development Co., William E. Snee and others on the Summit Hotel property in South Union Township is drilling at 350 feet. It is located 1,250 feet due south of the No. 1.

SOUTHWEST PENNSYLVANIA

In Allegheny County, Pennsylvania, Charles B. Wachter test on the Mrs. Emma Skees farm in Sewickley Township, in the Hundred-foot sand, is good for a barrel a day. In Franklin Township, W. H. Say and others No. 4 Mrs. D. Rosensteel, in the same formation, is showing for 1½ bbls. a day. In Hampton Township, O. Miller's test on the Kauffman farm penetrated the Hundred-foot sand and it was dry. In Indiana Township, the Rodgers Development Co. is drilling at 2,800 feet on the Carson heirs farm.

In Beaver County, South Penn Oil Co. completed No. 15 William Taylor farm in Green Township in Berea grit and it is a three-quarter barrel pumper.

In Washington County, I. C. Bloom and others deepened No. 2 Clyde Hinerman in South Franklin Township from 900 feet to 1,350 feet, Dunkard sand, and it is showing 15 bbls. a day. In Amwell Township, the New Oil & Gas Co. completed deepening No. 1 Sarah R. C. Dodd to 3,169 feet, Fifth sand, and it is good for 5 bbls. a day.

In Peters Township, Washington County, R. M. Duden and others completed No. 2 J. E. Johnson at 2,749 feet, Fifth sand. The Fifth sand gas was at 2,605 feet and after a shot it gauges 37,000 feet a day with a rock pressure of 300 pounds. In this township, William Smith and others drilled a test on the W. Donaldson farm through the Fifth sand to 2,620 feet and it was dry and plugged.

In South Strabane Township, Washington County, the Carnegie Natural Gas Co. completed a test on the S. W. Bails farm at 2,929 feet. The Fifth sand was topped at 2,902 feet with 424,000 feet of gas at 2,918-20 feet.

In Greene County, the Equitable Gas Co. deepened No. 560, William Hoge farm, Jefferson Township, from 2,460 feet to 3,095 feet and it is a gas well gauging 63,000 feet a day from the Fifth sand and Stray sand. In Morris Township, this company is getting ready to deepen No. 1 D. W. Hopkins starting at 2,204 feet. In Gilmore Township, this company is down 3,165 feet on the Z. D. Griffith farm and in Wayne Township is drilling out bailer at 1,008 feet on the B. F. Thralls farm.

In Franklin Township, Greene County, the Manufacturers Light & Heat Co. is drilling at 2,280 feet deepening the test on the C. C. Wood farm. The Big Injun was topped at 1,740 feet with 22,000 feet of gas at 1,890 feet. This company has made a location for a test on the Frank D. Nichols farm in Center Township and is drilling at 935 feet, same township, on the W. L. Fordyce No. 2.

In Center Township, Greene County, the South Penn Oil Co. is down 1,555 feet cementing caves in the Samuel Harvey No. 11. The Carnegie Natural Gas Co. is rigging up the J. H. Orndoff No. 2 and grading a road for the J. W. Milliken No. 3. The Union Gasoline & Oil Corp. has reached 935 feet on the Mabel Bodley farm. J. B. Orndoff is drilling at 1,210 feet on the Mattie I. Scott farm.

In Dunkard Township, Greene County, Convex Glass Co. is moving in tools on the Van Voorhis farm. In Cumberland Township, Carnegie Natural Gas Co. is drilling at 2,715 feet on the Titus farm, with the top of the Nineveh Thirty-foot sand at 2,517 feet, 53,000 feet of gas at 2,521 feet and the bottom of the sand at 2,548 feet.

In Richhill Township, Smith McCracken is down 1,800 feet on the Asa Hughes farm. The Manufacturers Light & Heat Co. is fishing at 2,290 feet on the O. M. Grinnage farm. In Aleppo Township, Cochran & Cochran are drilling at 3,500 feet on the John Strope No. 3. In Gilmore Township, the Duquesne Gas Co. is down 2,434 feet on the A. J. Lemon farm.

In Washington County, Benedum & Trees are drilling at 1,963 feet on the Mary Boone farm in Peters Township. Henderson & Co. have reached 2,540 feet on the Bell heirs farm. In Bethlehem Township, William Potts & Co. are drilling at 1,900 feet on the Ross Mowl farm.

In South Franklin Township, Washington County, the Carnegie Natural Gas Co. has spudded in and started drilling No. 3 M. C. Manon. The Union Gasoline & Oil Corp. is down 1,750 feet in the W. B. Hazlett No. 2. The Dunn Mar Oil & Gas Co. is building the rig for the J. T. Baldwin No. 3.

In Amwell Township, the Carnegie Natural Gas Co.-C. W. Farabee No. 2 is at 2,213 feet. The Moore-Orrill & Co. No. 4 Martha Hazlett is at 640 feet. The Peoples Gas Co. is testing casing at 1,970 feet on the Walter Redd farm.

Deep Tests

In Washington County, the deep test of Norwood Johnston and others on the James McBurney farm in Mount Pleasant Township is ready to be cased down to 6,190 feet. Eight and five-eighths inch extreme line casing will be run.

In Beaver County, the test of John T. Galey and others on the Minnie Weigle (Duff) farm in South Beaver Township made little progress during the week. In drilling by the lost tools 172 feet in the Corniferous lime the drilling tools were stopped by rubbing on the stem of the lost tools. An attempt is being made to blow the jars of the lost tools so as to get by.

In Hampton Township, Allegheny County, the South Penn Oil Co. and others are drilling at 1,340 feet on the Christian Z. Schove farm. The top of the Vanport lime was at 510 feet. The top of the Injun sand was at 785 feet.

In Shenango Township, Lawrence County, the test of the Carnegie Natural Gas Co. on the W. A. Currie farm is now drilling at 370 feet.

In Westmoreland County, a new rig is being built over the test on the Indiana Savings Bank lease in Fairfield Township preparatory to running casing. The well is still producing gas from the Onondaga at 7,594 feet. It is being drilled by the Potter Development Co., William Snee and others.

WEST VIRGINIA

Only two small producers were completed in West Virginia during the week. In Tyler County, the Gale Oil Co. completed No. 4 George Smith, Union district, in Maxton sand at 1,353 feet. It is good for 4 bbls. a day. In McElroy district, same county, S. J. McIntyre and H. R. Wright completed No. 2 Andrew Matthews at 2,234 feet. After a 20-quart shot it was good for 1 bbl. a day.

Gas Wells

In Boone County, the Owens Illinois Glass Co. completed three gas wells. The test on the E. C. and C. C. Stollings farm in Washington district is good for 236,000 feet a day from the Big lime and 149,000 feet a day from the Berea. The total depth was 1,785 feet. In Scott district, No. 27 on the Cassingham Coal Land Co. was good for 236,000 feet a day from the Berea with a final depth of 2,390 feet. No. 22 on the Allen and Pryor lease, same district, gauges 224,000 feet a day from the Big lime and 128,000 feet a day from the Berea. The total depth was 2,025 feet.

In Braxton County, the Pittsburgh & West Virginia Gas Co. completed No. 7,595 on the Parkersburg Mills in Birch district at 2,649 feet. Big Injun was at 1,831-1,965 feet, with gas gauging 92,000 feet a day at 1,934 feet. In this district, the same company completed No. 7,612 on the S. B. Cook farm at 1,297 feet. The First Salt sand was at 1,225-95 feet with 75,000 feet of gas at 1,281-95 feet.

In Calhoun County, the Henderson Oil Co. completed a test on the Allen Wilmouth farm in Sherman district at 2,900 feet as a gas well. Injun, 2,258-98 feet; gas, 2,258-65 feet. It gauged after a 60-quart shot 430,000 feet a day. In this district, Ivy Gainer and others completed a test on the A. H. Stump farm at 1,680 feet, with 44,000 feet of gas at 1,629-65 feet.

In Gilmer County, the Pittsburgh & West Virginia Gas Co. completed a fair gas well, No. 7618, on the S. A. Hays farm in Glenville Independent district. The Big lime was at 1,365 feet with 4,500,000 feet of gas at 1,400 feet, the final depth.

In Kanawha County, Pure Oil Co. completed No. 271 on the Williams Coal Co. lease in Cabin Creek district at 3,007 feet. Berea, 2,968-3,004 feet, with 393,120 feet of gas.

In Lincoln County, Black & Pridemore completed a test on the W. H. Meadows farm in Duval district at 4,325 feet. Berea, 2,304-27 feet; Brown shale, 2,327-3,438 feet. The gauge from the Berea and Brown shale was 460,000 feet a day.

In Jefferson district, Lincoln County, the Abbott Gas Co. drilled a failure on the J. C. Abbott farm to 3,745 feet. It had a small amount of gas at 3,440 feet. It was plugged. In Union district, the Huntington Development Co. deepened No. 291 on its own property to 3,522 feet. The Brown shale was at 2,860-3,512 feet with 312,000 feet of gas at 3,095-3,485 feet.

In Putnam County, Hand & Smith drilled a test on the Nitro Industrial Corp. lease in Pocatalico district to 4,358 feet. Berea, 2,060-81 feet, with 80,000 feet of gas a day.

In Wayne County, the Southeastern Gas Co. completed a test on the Frank Marcum farm in Lincoln district at 2,690 feet. Brown shale at 1,955-2,670 feet yielded 200,000 feet of gas per day.

Oriskany Gas Field

Two wells were completed in Kanawha County. In the Coopers Creek field, the United Carbon Co. completed a second test on the H. C. Smith farm in Elk district at a total depth of 5,073½ feet and it gauges 4,552,000 feet a day from the Oriskany.

In the Campbells Creek field, Godfrey L. Cabot, Inc., completed No. 5 on the Nellie B. Tompkins farm in Malden district at 4,666 feet. The gauge is 359,000 feet daily.

In Poca district, on Grapevine Creek, H. V. Cottrell has a location for a test on the Albert Boggess Estate. On the same waters, the West Virginia Gas Corp. has a location for a test on the Elbridge B. Fisher farm.

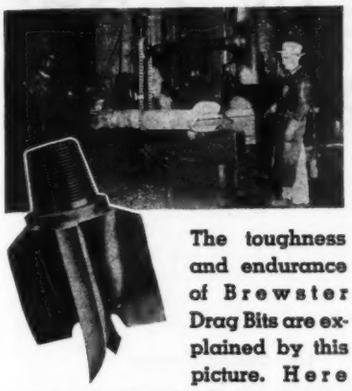
In Poca district, east of Sissonville, the South Penn Oil Co. shut down and ran casing bottomed in the Corniferous lime at 5,054 feet in the test on the T. H. Newhouse farm. This will be an interesting test. This company's No. 4 on the Kate Scott farm in Malden district is drilling at 1,973 feet and shut down for a new cable.

In Poca district, the test of Guy B. Ray on the Elmer Thaxton and others lease was shot and the gas increased

(Continued on Page 122)

Insist on . . .

BREWSTER FORGED DRAG BITS



The toughness and endurance of Brewster Drag Bits are explained by this picture. Here you see a drag bit being shaped and toughened under the forging hammer from a special alloy steel billet. Next it will be threaded, then dressed with Tungsten Carbide Hard Metal.

Our Drag Bit Service is the largest in the Mid-Continent Field. Take advantage of it—and save!

The BREWSTER CO., Inc.

Phone 3181 Shreveport, La.

Houston . Longview . Lake Charles
New Iberia . Houma . Rodessa
Corpus Christi

EST. 1870 WALL WAXED LAID ROPE

Complete stocks of Oil Field Cordage carried in Mid-Continent and Gulf Coast Fields

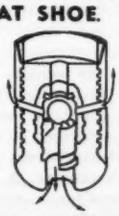
WALL ROPE WORKS, Inc.

Houston, Texas

2000 Nance St. Telep. Cap. 0244

RESULTS

It's easy to see why you can hit the bull's eye . . . with a BAKER CEMENT WHIRLER FLOAT SHOE.



The cement is whirled upward spirally, and more complete distribution is certain.

BAKER CEMENT EQUIPMENT

Among Gulf Coast Drilling Contractors

Rowan Drilling Co. has apparently uncovered production around the flanks of the old Venice salt dome in Plaquemines Parish in Coastal Louisiana. The well is being drilled for the Tide Water Associated Oil Co. and is located on the Manhattan Land & Fruit Co. lease within 460 feet of a dry hole. Sand showing oil was topped at 7,187 feet and the hole is bottomed in sand at 7,208 feet, where a string of 7-inch casing is being run for a production test. The company has drilled two dry holes around the structure which were put down by the same contractor. In the Fairbanks field, Harris County, No. 1 Wright is being rigged up for Stanolind Oil & Gas Co. and Amerada Petroleum Co., while at Amelia two rigs are operating for the Humble Oil & Refining Co. Rowan Drilling Co. No. 1 Jameson, a half mile northeast of the Danbury dome, Brazoria County, has been spudded.

Smith & McDannald have abandoned Texas Co. No. 1 Lelia Crawford, a wildcat located in the Willis area, Montgomery County, and the rig is being moved to the South Houston field for No. 8 First National Bank, which will be drilled for Stanolind Oil & Gas Co. At St. Martinsville, for the Tide Water Associated Oil Co. No. 4 Smedes has been abandoned at 6,884 feet, and the rig is being moved over for No. 5 Smedes. In the meantime, Pure Oil Co. No. 4 Shelor in the Dickinson field has been completed for a good oil well, and contract has been received for another test. Operations continue with seven rigs located at Charenton for the Pan American Production Co., at Long Lake for Tide Water Associated Oil Co., at South Houston for Stanolind Oil & Gas Co., at Hastings with two rigs for Stanolind Oil & Gas Co., and in the Mowata area in Acadia Parish for themselves and others.

Cron & Gracey have moved a second rig to the Hackberry field in Cameron Parish for Stanolind Oil & Gas Co. No. 9 Carter and Sweeney; are rigging up at Long Lake in Lafourche Parish for Fohs Oil Co. No. 1 State; have three rigs operating at Hastings for Stanolind Oil & Gas Co., one at Placedo for Shell Petroleum Corp., one at Flour Bluff for Humble Oil & Refining Co., one at Rockport for Barnsdall Oil Co. and one at South Houston for Stanolind Oil & Gas Co.

George Echols has completed his second oil well in the north extension area of the Heyser field, and it has the appearance of being a better producer than the first test, which opened a new sand and extended the field into Victoria County. A good sand body was cored to a total depth of 5,753 feet and the well was completed through perforated casing. The rig will be moved over to the Texas Pacific Coal & Oil Co. lease, approximately 2,500 feet north of No. 5 Bennett. Application to drill five wells in the Palacios field, Matagorda County, have been made by Echols. Other operations are reported in Marion County and at Gillis for Fohs Oil Co.

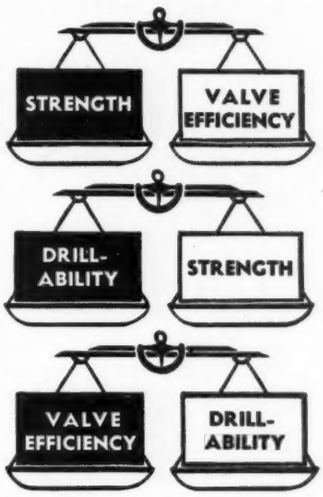
Harry L. Edwards received contract from the Kirby Petroleum Co. for No. 1 Carrie Baker, offsetting Shell Petroleum Corp. No. 1-B Ramsey in the Lockridge field, and the rig is being moved in. Woodley Petroleum Co. No. 1 Hanchey, located in the Hardin field, Liberty County, has been spudded. Two rotaries are operating at Dickinson for the Coast Petroleum Co., while at Hastings two are digging for Stanolind Oil & Gas Co. Edwards Drilling Co. has two outfits operating at Amelia for Humble Oil & Refining Co.

Glenn H. McCarthy is scheduled to move in a rig to the Friendswood area in Harris County within the next few days, with the staking of location for No. 1 Whitcomb, about 1 mile southeast of Humble Oil & Refining Co. No. 1 Settegast, which is scheduled to be completed during the week after a good section of oil sand was cored. McCarthy is operating four rigs in the Palacios area, Matagorda, three for himself located on the Foley, Rolphs and Palacios State Bank lease, while one is operating for the Sun Oil Co. The rig for the proposed Friendswood test will probably be moved from the Amelia field, where he has three rigs running.

Of the 33 locations announced for the Texas Coast last week, three were important wildcats to be drilled in Harris and Chambers counties. Northwest of LaPorte, in the Nicklos Clapper Survey, West Production Co. is rigging up for No. 1 Ammon Underood. Northeast of the Anahuac field and northwest of Anahuac in the Luke Bryan Survey, David B. MacDaniel is moving his rig to the S. E. Barrow lease, which will probably be drilled below 7,500 feet. The other wildcat is located on the Cedar Bayou Prospect and will be drilled by George H. Anderson and others on the J. H. Fisher lease in the John Janis Survey.

On the Jefferson Island salt dome, Iberia Parish, Jefferson Lake Oil Co. No. 414 State Lake Pigneur topped oil sand in a sidetracked hole at 7,060 feet and is scheduled to run casing for a production test after coring to a depth of 7,069 feet. The test attracted attention several weeks ago when production tests were made in the original hole at 6,930-40 feet, at which depth it flowed some oil and salt water. It was deepened and drilled to 7,060 feet and was then plugged back and sidetracked. Location is in the lake of Township 12s-5e.

With BAKER CEMENT EQUIPMENT you have



Three-Feature BALANCE

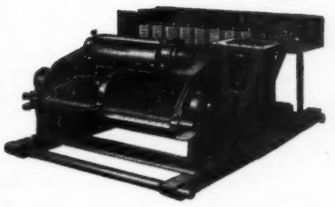
Standco NO-SMOKE

STANDCO BRAKE LINING

Drillers all prefer STANDCO BRAKE LINING because it makes an easy brake, "feeds off" evenly, and wears and wears and wears. See page 1636, Composite Catalog.

STANDARD BRAKE LINING CO.

McNEELY Vibrating MUD SCREEN MODEL E



A new and improved McNEELY Vibrating Mud Screen which more than meets the needs of the oil industry for a dependable supply of clean, plastic drilling fluid at lowest cost. Advantages include super-strength to withstand hardest usage; *completely unitized* design for convenient handling; large capacity; a curved screen surface (exclusive) to increase capacity and prolong screen cloth life, and simple, quick installation or removal. Vibrating frame and screen cloth are divided into two sections. Only one-half the cloth need be replaced at one time and each half is independently tensioned.

Write for Bulletin No. 101 for complete details.

VERNON TOOL CO., LTD.

2740 EAST 37TH STREET, LOS ANGELES, CALIF.

GULF COAST AND MID-CONTINENT REPRESENTATIVE

McNEELY MATERIALS COMPANY

2935 JENSEN DRIVE, HOUSTON, TEXAS

EXPORT

THE NATIONAL SUPPLY CORP. • OIL WELL SUPPLY CO.

East and East Central Texas

By
L. E. BREDBERG

WATER INCREASE IN 2,595 WELLS IN EAST TEXAS AREA

DALLAS, Tex., July 12.—Salt water production in the East Texas field has increased to an amount where it is now slightly higher than the proration allowable of the wells that are making oil and water in the field. The last water report made by the engineering department of the Texas Railroad Commission shows that 2,595 pumping and flowing wells are making 53,358 bbls. of water per day with the oil, or an average of 20.56 bbls. of water per day per well, a fraction of a barrel (0.56) over the daily per well oil allowable of these producers.

There are now 3,663 pumping wells in the field and 358 wells produced by air- or gas-lift.

The Goodnight Oil Co. nas abandoned No. 1 Ford & Nash test, about a mile north of the Cayuga field in Henderson County, and in the John Hollen Survey, after the test showed a saturated streak in the Woodbine sand. It was given up as a dry hole at a total depth of 4,123 feet.

Roeser & Pendleton, Inc., No. 3 V. W. Bowyer, on the west edge of the Cayuga field, northwestern corner of Anderson County, and in the E. Ritter Survey, is still incomplete. It is bottomed in Glen Rose sand, lower member of the Trinity. It was given a dose of 10,000 gallons of acid and flowed for 12 hours, then quit. Total depth is 7,676 feet. It is estimated good for about 20 bbls. per day on gas lift, the operators planning on letting it stand for several days then trying again to make a commercial producer of it. This is the third Trinity test drilled in this field, the other two, drilled by Tide Water Associated and Seaboard Oil Corp. having proved gas-distillate wells.

Another deep test having trouble is Magnolia Petroleum Co. No. 2 J. A. Chapman, George Dyer Survey, on the east edge of the Talco field, Titus County. This is the second deep try for production in the area, a previous test, 2 miles east of the field, having proved dry in the Glen Rose. Number 2 Chapman was plugged back from 5,661 feet to 5,620 feet and 500 gallons of acid used under 2,100 pounds pressure. A second dose of 400 gallons and the third dose of 2,000 gallons were later administered, but the high pressure used in injecting the acid caused water to break through the plugs. It is to be plugged back again and another treatment of acid given it in the hope of making the first Glen Rose producer in the Talco field.

Pure Oil Co. No. 16 Kendrick, located in the Mexia field, also failed as a Glen Rose test and is now seeking production in the Travis Peak after topping that formation at 5,656 feet. It is now drilling below 6,050 feet.

Talco Extension

The Talco field was extended 2,700 feet south this week when Adams & Lyle No. 1 J. R. Milligan, located in the Isaac P. Stern Survey, Franklin County, pumped 276 bbls. of oil from Paluxy sand at a total depth of 4,310 feet. It topped the Paluxy at 4,165 feet.

New Locations

Locations in eastern Texas have been dwindling during the past six months as few discoveries have been made to encourage wildcatting in the district and many dry holes have lent discouragement, instead. One location was made in the past week in Freestone County by S. J. Taylor on the G. Weaver lands, in the T. Longbotham Survey, 200 feet from the northwest and 300 feet from the southwest lines of the lease.

A tentative test is planned for the extreme southern part of Anderson County, on the Houston County line, Joe E. McDowell of Elkhart, Tex., and contractor associates of Houston, are working on a deal to drill on the Newsom farm in the T. C. Lively Survey. James H. Gardner of the Gardner Petroleum Corp. held a lease on the 244-acre Newson property, farming out 164 acres of it to the above parties subject to the spudding of a test on the lease by July 20. Mr. Gardner retains the other 80 acres in the lease. Sun Oil Co., Shell Petroleum Corp. and Humble Oil & Refining Co. have made bottom-hole contracts with McDowell. If drilled it will be an important test in view of the fact that a gas field is located not too distant to the south, at Grapeland, and one to the southeast at Percilla, both in Houston County and both producing from the Woodbine, which may pay off in oil on the Anderson-Houston line.

Sulphur Bluff Order

The Texas Railroad Commission has amended its proration order on the Sulphur Bluff field in Hopkins County, changing the method from a flat per well basis to an acreage-per well basis, as requested by the operators some time ago. The field was put on a 10-acre unit basis, 15 acres the maximum assigned to a unit.

Dry Hole in Hopkins

Housh & Thompson, codiscoverers of the Talco field in northwestern Titus County, have drilled a failure along the Fault line 3 miles southwest of the Sulphur Bluff field in Hopkins County. Their No. 1 Spencer, was given up as dry at 4,805 feet. Elevation is 494 feet.

Deep Location

The American Liberty Oil Co. of Dallas and E. B. LaRue of Athens have staked location for a deep test in the eastern part of Henderson County and 3 miles northeast of LaRue in an area in which several Woodbine failures have been drilled on the LaRue structure. Location is in the Philip Jackson Survey. This will be an important and interesting test due to the Tide Water Associated, Seaboard Oil Corp. and Humble Oil & Refining Co.'s strike at Opelika, about 15 miles due north, which did not make a commercial producer from the Trinity due to stuck drill pipe preventing completion. The three companies are now drilling their second test on the Opelika structure, which is considered sure of proving a field from the deeper series.

The Opelika well is producing around 8 bbls. of high-gravity oil per day, coming through three small openings in the rock-bit on the bottom of the drill stem. The second test is now drilling below 6,500 feet and will start coring around 7,150 feet, the oil coming from the original test at 7,195 feet. The operators did not set a protective string of 7-inch casing in the first hole, but have set such a string in the second test.

Another Talco Trinity

What is believed to be a second attempt for Trinity production in the Talco field, this time on the Franklin County side of the line, is expected to be made by the Magnolia Petroleum Co. on its Crawford lease, in the I. P. Stern Survey.

EAST CENTRAL TEXAS COMPLETIONS

Anderson County

Tide Water Associated and others No. 1 Jansing, 5,151-5,326 feet, 98,000,000 feet of gas.

Hill County

A. N. Mabry No. 1 M. Holderman, 680 feet, 5 bbls oil and 10 bbls. water per day on pump, elevation 659 feet, 1 mile south of Mount Calm.

Franklin County

Housh & Thompson No. 8 Owings, 4,200-4,300 feet, 514 bbls. on pump.

Titus County

Byars and others No. 4-A Edwards, 4,245-4,300 feet, 560 bbls. on swab. Hinton and others No. 3 Davis. 4,197-4,334 feet, 488 bbls. on pump; No. 1 Wilson, 4,228-79 feet, 519 bbls. on pump. Humble Oil & Refining Co. No. 9 Blackburn, 4,268-4,309 feet, 245 bbls. on pump; No. 42 King, 4,321 feet, 250 bbls. on pump; No. 3 Stevenson, 4,358 feet, 18 bbls. on pump. Tide Water Associated No. 4 Wilson, 4,285 feet, 416 bbls. on pump.

Henderson County

Cortex Petroleum Co. No. 4 Harton, 4,071-92 feet, 178 bbls. through one-eighth inch choke.

Hopkins County

Housh & Thompson No. 1 Spenser, 4,805 feet, dry and abandoned, elevation 494 feet, 3 miles southwest of Sulphur Bluff field.

EAST TEXAS COMPLETIONS

Gregg County

Arkansas Fuel Oil Co. No. 12 Adrain-McCrary, 3,499-3,524 feet, 23 bbls. in 15 minutes. Atlantic Refining Co. No. 72 Moore, 3,499-3,642 feet, 100 bbls. per hour. Atlantic and Sun No. 81 Hayes, 3,514-3,620 feet, 75 bbls. per hour. Barnsdall Oil Co. No. 14 McGrede, 3,600-10 feet, 16 bbls. in 15 minutes. Empire Oil & Refining Co. No. 18 Aiken, 3,588-3,629 feet, 16 bbls. in 15 minutes; No. 23 Jeter, 3,555-71 feet, 4 bbls. in 15 minutes. Magnolia Petroleum Co. No. 13 Fisher, 3,444-66 feet, 40 bbls. per hour. McAllister Fuel Co. No. 2 Snoddy, 3,583-95 feet, 40 bbls. in 35 minutes. Snowden & McSweeney No. 12 Bonner, 3,614-29 feet, 25 bbls. in 30 minutes. Tide Water Associated No. 6 Woods, dry and abandoned, 3,533 feet. Adams & Lyle No. 11 Howard, 3,641-46 feet, 40 bbls. in 30 minutes. Atlantic Refining Co. No. 18-A Andrews, 3,588-3,684 feet, 78 bbls. per hour; No. 17-B & C Andrews, 3,554-3,627 feet, 130 bbls. per hour. Binaggio Brothers No. 1 Lacey, dry and and abandoned, 3,508 feet. Central-Commercial Oil Co. No. 12 King, 3,708-09 feet, 30 bbls. per hour. Delta Drilling Co. No. 4 Hughey-Ross, 3,537-42 feet, 60 bbls. in 30 minutes. Gulf Oil Corp. No. 35 Culver, 3,495-3,524 feet, 55 bbls. per hour. Hunter & Rowe No. 11 Still, 3,532-44 feet, 10 bbls. in 15 minutes. Salmon Oil Co. No. 8 Smith, 3,547-55 feet, 54 bbls. in 30 minutes. Shell Petroleum Corp. No. 68 Watson, 3,556-3,615 feet, 35 bbls. in 30 minutes, Sinclair Prairie Oil Co. No. 20-B King, 3,464-90 feet, 20 bbls. in 15 minutes; No. 2 King, 3,462-92 feet, 22 bbls. in 15 minutes.

Smith County

Roosth & Genecov No. 8 Bateman, 3,751-52 feet, 40 bbls. in 35 minutes. Sun Oil No. 8 Seale, 3,710-10½ feet, 7 bbls. on pump.

Rusk County

Blackwell Oil & Gas Co. No. 9 Moore, 3,620-3,646 feet, 30 bbls. in 30 minutes. British American Oil Co. No. 9 Murphy, 3,630-41 feet, 48 bbls. in 30 minutes. F. W. Fisher No. 19-B Eaton, 3,760-80 feet, 142 bbls. in two hours. Gulf Oil Corp. No. 33 Turner, 3,782-84 feet, 5 bbls. per hour. Humble Oil & Refining Co. No. 21 Mullikin, 3,676-3,765 feet, 55 bbls. per hour. H. L. Hunt No. 8 Finney, 3,607-3,700 feet, 20 bbls. in 75 minutes on pump. Magnolia Petroleum Co. No. 10 Grissom, 3,673-74 feet, 20 bbls. in 15 minutes. A. V. Riley No. 2, 3,614-15 feet, 20 bbls. in three hours on pump. Spandsco Oil Co. No. 11 Brett, 3,696-3,721 feet, 60 bbls. per hour. Texas Co. No. 11 Pinkston, 3,680-86 feet, 20 bbls. in 30 minutes. Tide Water Associated No. 6-A Finney, 3,675-3,706 feet, 10 bbls. in 15 minutes.

Upshur County

J. Coates No. 5 Bowie, 3,593-96 feet, 80 bbls. per hour.

Kansas Developments

By
DAL DALRYMPLE

SUSPEND TESTS IN 43 POOLS, AWAITING NEW REGULATIONS

Scheduled field tests in 43 Kansas oil pools were suspended the past week by the Corporation Commission until new regulations governing taking of potentials are compiled. The commission's order, issued at the close of the hearing where recommendations were made for revision of the state proration system, will not affect initial tests and 60-day retests, according to E. G. Dahlgren, conservation director.

A hearing will be held at Wichita August 20 on charges that gas is being wasted in the Burrton field of Reno and Harvey counties, it was announced by E. K. Blincoe, chairman of the Kansas Corporation Commission. The commission has received complaints from industrial concerns in several Kansas towns which use natural gas from the Burrton field that the supply is being depleted through oil production operations.

C. L. Lebow and others No. 1 Richmond, SW SW SE section 15-11-17w, east side extension well in the busy Bemis field, Ellis County, pumped 864 bbls. of oil in six hours and was given potential rating of 2,873 bbls. Same operators have started an east offset and Margay Oil Co. has started a west offset. York State Oil Co. is expected to extend the Bemis pool about one-half mile south at No. 1 Bemis, NE NE SW section 28-11-17w, which had a saturated core at 3,480 feet, total depth.

Rice County

Several large wells were completed in the Hauschild-Saxman-Theede district of Rice County. The largest producer was Dick Sage and others No. 6 Gossman, SE NW NW section 9-21-7w, which had Conglomerate at 3,358-59 feet, total depth, and made potential of 6,137 bbls. of oil.

Grace Oil Co. No. 4 Gossman, NE cor. section 8-21-7w, had Conglomerate at 3,352 feet, total depth 3,370 feet, flowed 605 bbls. of oil in two hours, making potential of 6,111 bbls.

Reserve Development Corp. No. 7 Patton, NE NE NW section 16-21-7w, total depth 3,388 feet, flowed 1,084 bbls. of oil in six hours, potential 4,108 bbls. Atlantic Refining Co. No. 3 Gossman A, SW NE SE section 8-21-7w, total depth 3,364 feet, pumped 128 bbls. of oil in six hours, potential 485 bbls. T. M. Deal Oil & Gas Co. No. 1 Gossman, SW cor. section 4-21-7w, Conglomerate 3,360-62 feet, total depth, potential 2,230 bbls. Aylward and others No. 6 Johnson, NE cor. section 17-21-7w, had Conglomerate at 3,367-84 feet, total depth, and was temporarily abandoned.

Other Rice County completions of the past week: Sinclair Prairie Oil Co. No. 1 Powell, NE NE SW section 31-18-7w, Siliceous lime 3,233-38 feet, total depth, plugged back to 3,236 feet, acidized, pumped 136 bbls. of oil and 440 bbls. of water in 20 hours, potential 171 bbls. of oil, with 533 bbls. of water. Barnsdall Oil Co. No. 3 Hathaway, SE NW NE section 33-19-10w, total depth 3,289 feet, acidized, potential 1,542 bbls. Gulf Oil Corp. No. 8 Knop, NE NE NW section 33-19-10w, total depth 3,282 feet, acidized, potential 1,004 bbls. Same operator's No. 3 Poncin, NE SW NE section 5-20-10w, Siliceous lime 3,321-30 feet, total depth, swabbed 49 bbls. of oil in two hours, acidized, potential 1,595 bbls.

More Silica Wells

J. H. Tatlock No. 5 Poncin, NW NE NE section 5-20-10w, Siliceous 3,299-3,304 feet, total depth, pumped 300 bbls. of oil in six hours, potential 1,082 bbls. after acid; same operator's No. 7 Poncin, NE cor. section 5-20-10w, total depth 3,321 feet, pumped 121 bbls. of oil and 6 per cent water in six hours, potential 436 bbls. Same operator's No. 2 Bayer, SW NE NW section 7-20-10w, total depth 3,295 feet, potential 1,428 bbls. Empire Oil & Refining Co. No. 10 Heckel, SE NE SW section 18-20-9w, total depth 3,345 feet, potential 666 bbls. Sinclair Prairie Oil Co. No. 2 Knop, NW cor. section 4-20-10w, total depth 3,318 feet; swabbed 158 bbls. of oil in 15 hours, acidized, potential 592 bbls.

Recent Rice County completions also included the following: Continental Oil Co. No. 4 Nickel, section 13-18-8w, total depth 3,225 feet, potential 1,332 bbls. Same company's No. 2 Feuller A, section 12-18-8w, total depth 3,275 feet, abandoned. Bell Oil & Gas Co. and others No. 1 Wilkins, section 23-21-9w, total depth 3,687 feet, abandoned. Atlantic Refining Co. No. 4 Mills, section 8-21-7w, total depth 108 feet, abandoned. Same company's No. 4 Patton B, section 7-21-7w, total depth 493 feet, abandoned. Same company's No. 3 Hughes B, section 6-21-7w, total depth 3,334 feet, potential 422 bbls.

Barnsdall Oil Co. No. 4 Hathaway, section 33-19-10w, total depth 3,286 feet, potential 1,921 bbls. Transwestern Oil Co. No. 3 Stumps, section 4-18-10w, total depth 3,297 feet, abandoned. Ohio Oil Co. No. 10 Proffitt, section 5-20-9w, total depth 3,242 feet, potential 296 bbls. Stanolind Oil & Gas Co. No. 1 Hathaway, section 33-19-10w, total depth 3,310 feet, potential 890 bbls.

First reports of new work in Rice County: Continental Oil Co. and others No. 4 Kimple, NW SE NW section 25-18-8w, rig; Stanolind Oil & Gas Co. No. 2 Manke, SE SW SE section 28-19-10k, rigging up rotary; Empire Oil & Refining Co. No. 1 Gossman, SE cor. section 5-21-7w, rig; D. R. Lauck and Wolf Creek Oil Co. No. 1 Wilhaus, SE SW NE section 5-21-7w, moving in material.

Barton County

Stanolind Oil & Gas Co. No. 1 Panning, SW SW SE section 2-20-11w, Barton County sector of the Silica field, was bottomed at 3,281 feet and made potential of 1,633 bbls. of oil.

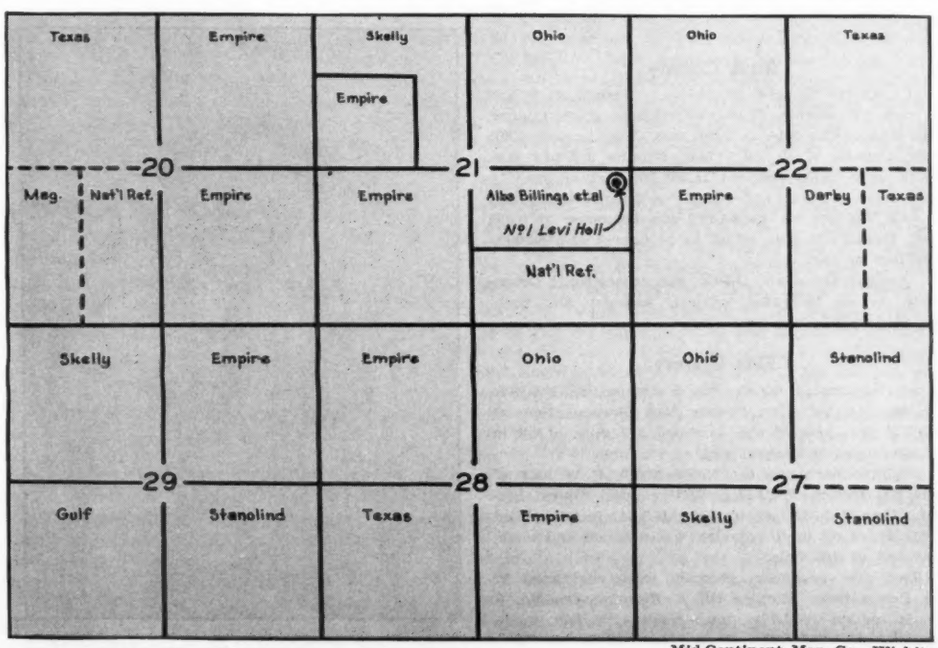
Barton County completions of the past fortnight included the following: Polk & Fortson No. 1 Meyers, section 16-16-12w, total depth 3,353 feet, pumped 342 bbls. of oil. Continental Oil Co. No. 2 Ainsworth A, section 33-16-13w, total depth 3,378 feet, potential 1,845 bbls. Gulf Oil Corp. No. 1 Axman, section 23-17-15w, total depth 3,589 feet, abandoned. Magnolia Petroleum Co. No. 8 Roetzell, section 24-20-11w, total depth 3,252 feet, potential 2,720 bbls.

New work in Barton County: Texas Co. No. 2 Hoffman, NE NW NW section 6-16-13w, building rig; Phillips Petroleum Co. No. 1 Bitter, NE cor. section 6-16-13w, building rig; same company's No. 1 McClanahan, NE NE SE section 7-16-13w, cellar; Ralph Wixson and others No. 1 Buhrle, SE SE NE section 14-16-13w, wildcat, cellar; Armer and Vernon Oil & Gas Co. No. 3 Ainsworth, NW NE SE section 33-16-13w, set 10-inch casing at 253 feet, waiting on cement; Eason Oil Co. No. 1 Ainsworth, NE SE SE section 33-16-13w, rigging up rotary; Indian Territory Illuminating Oil Co. No. 1 Hoffman, NE cor. section 1-16-14w, location; same company's No. 1 Sessler, NE SE SW section 24-20-11w, moving in material. Magnolia Petroleum Co. No. 10 Roetzel, NE NW SE section 24-20-11w, rigging up rotary.

Russell County

Alva Billings and others No. 1 Levi Holl, NE NE SE section 21-14-14w, wildcat, opened a new producing area in Russell County. It had anhydrite at 845 feet, Kansas City lime 3,008 feet, total depth 3,055 feet. It was acidized, swabbed 70 bbls. of oil in seven hours and made potential of 464 bbls.

Other completions of the week in Russell County: Hartman & Blair and others No. 2 Boxberger, SE NE NW section 33-13-14w, Siliceous lime 3,292½ feet, Granite Wash 3,298½ feet, total depth; potential 400 bbls. of oil, with 80 bbls. water. Smoky Hill Oil Corp. No. 12 Miller, NW SW NE section 31-14-13w, total depth 2,953 feet, plugged back to 2,939 feet, acidized, potential 1,071 bbls. of oil. A. H. Witt No. 4-A Witt, NE NE SE section 3-14-15w, total depth 3,094 feet,



Mid-Continent Map Co., Wichita

Alva Billings opened a new area in Russell County at No. 1 Levi Holl, NE NE SE section 21-14-14w

acidized, potential 2,367 bbls. Transwestern Oil Co. No. 7 William Polcyn, NE SW SW section 11-14-15w, total depth 3,268 feet, potential 1,618 bbls. Hartman & Blair No. 5 Harbaugh, NW NE SW section 25-14-15w, total depth 3,158 feet, potential 1,312 bbls.

Carter Oil Co. No. 2 Josephine, NE SE SE section 7-15-13w, total depth 3,216 feet, pumped 235 bbls. of oil in six hours, acidized, potential 2,283 bbls. Coralena Oil Co. No. 3 Sellens, NE NE NW section 17-15-13w, total depth 3,206 feet, acidized, pumped 676 bbls. of oil in 12 hours, potential 1,352 bbls. Empire Oil & Refining Co. No. 6 Sellens, NW SW SW section 30-15-13w, Siliceous lime 3,293-96 feet, total depth, acidized, pumped 538 bbls. of oil with 40 per cent water in 12 hours, potential 1,166 bbls. Same company's No. 7 Sellens, SW NW SW section 30-15-13w, Siliceous 3,294-98 feet, acidized, potential 1,992 bbls.

The Trapp District

W. I. Southern, Inc. No. 7 Boomhower A, NW SE NE section 30-15-13w, Siliceous 3,242-45 feet, total depth, acidized, potential 2,224 bbls. Derby Oil Co. and Reserve Development Co. No. 5 Michaelis, SW SW NW section 31-15-13w, total depth 3,274 feet, acidized, potential 2,476 bbls. Gulf Oil Corp. No. 5 Hoffman, NE NW SW section 31-15-13w, total depth 3,284 feet, potential 1,234 bbls. Sinclair Prairie Oil Co. and others No. 2 Sellens, SE SE NW section 36-15-13w, total depth 3,360 feet, acidized, potential 408 bbls. Empire Oil & Refining Co. No. 2 Boomhower, SE SE NE section 25-15-14w, total depth 3,307 feet, potential 2,328 bbls.

Other recent completions in Russell County: Gulf Oil Corp. No. 1 Mollie, section 25-15-14w, total depth 3,300 feet, potential 1,684 bbls. Empire Oil & Refining Co. No. 3 Bender A, section 25-15-14w, total depth 3,333 feet, potential 1,890 bbls. Gulf Oil Corp. No. 7 Michaelis, section 32-15-13w, total depth 3,297 feet, potential 1,856 bbls. Same company's No. 6 Michaelis, section 32-15-13w, total depth 3,354 feet, potential 1,798 bbls. W. I. Southern, Inc. No. 9 Michaelis, section 31-15-13w, total depth 3,283 feet, potential 2,749 bbls.

Empire Oil & Refining Co. No. 1 Holad, section 10-15-13w, total depth 3,341 feet, abandoned. Skelly Oil Co. No. 3 Ehrlick, section 25-14-15w, total depth 3,205 feet, pumped 1,183 bbls. of oil. Mays and others No. 1 Boxberger, section 26-14-14w, total depth 3,157 feet, plugged back to 3,010 feet, potential 1,130 bbls. Aylward and others No. 1 Jones, section 22-14-13w, total depth 3,230 feet, abandoned.

New work in Russell County: A. H. Witt No. 4-B Witt, NE NE SE section 3-14-15w, rig; Transwestern Oil Co. No. 3 Katharina Polcyn, NE NW NW section 14-14-15w, moving in material; Hartman & Blair No. 6 Harbaugh, NE NW SW section 25-14-15w, moving in material; Phillips Petroleum Co. No. 15 Hoffman, SW SE SE section 31-15-13w, building rig; same company's No. 16 Hoffman, SE cor. section 31-15-13w, moving in material; Empire Oil & Refining Co. No. 5 Boomhower, NW SE NE section 25-15-14w, rigging up rotary.

Rush County

Carter Oil Co. and others No. 1 Prosch, C N half N half SE section 21-18-16w, wildcat, Rush County, had Kansas City lime at 3,270 feet, Conglomerate 3,505 feet, Granite Wash 3,611 feet, Granite 3,612-14 feet, total depth, and produced 18,000,000 feet of gas.

Morgan & Flynn and others No. 3 Koril A, C S half S half NW section 23-18-16w, was bottomed at 3,555 feet, flowed 861 bbls. of oil in 24 hours, with 50,000,000 feet of gas.

Westgate-Greenland Oil Co. and others No. 1 Greenwalt, section 19-19-16w, wildcat, was dry and abandoned at 4,017 feet, total depth.

Ellis County

Sinclair Prairie Oil Co. No. 2 Romine, SE SW SW section 7-11-16w, Ellis County, had Siliceous lime at 3,307-15 feet, total depth, swabbed 312 bbls. of oil in 12 hours and made potential of 760 bbls.

Phillips Petroleum Co. No. 2 Staab, C W half W half NE section 11-12-18w, Walter area, topped Siliceous lime at 3,634 feet, total depth 3,641 feet, swabbed 154 bbls. of oil in four hours, was acidized and made potential of 786 bbls.

Two new producers recently were completed in the Bemis field. Empire Oil & Refining Co. No. 6 Bemis, section 21-11-17w, total depth 3,376 feet, made potential of 1,708 bbls. of oil. Deep Rock Oil Corp. No. 6 Baumer, section 27-11-17w, total depth 3,491 feet, potential 3,875 bbls.

Beardmore and others No. 6 Weiland, section 36-12-16w, was bottomed at 3,357 feet, plugged back to 3,250 feet and pumped 25 bbls. of oil daily. Fullerton No. 1 Jentzen, section 3-13-18w, was an abandoned location.

Four new operations in Ellis County were reported. Sinclair Prairie Oil Co. No. 1 Cress, NE SE NE section 13-11-17w, was a cellar. Deep Rock Oil Corp. No. 12 Baumer, NW NE NE section 27-11-17w, was a location. Same company's No. 13 Baumer, SE NE NW section 27-11-17w, was moving in material. Amerada Petroleum Corp. No. 1 Edith Shutts, SE SW NE section 6-12-17w, was a location.

Estimated Daily Production

Estimated daily production of Kansas for the week ending July 10 and for the preceding week, was as follows:

	Barrels	
	July 10	July 3
Oxford City	1,750	1,725
Burrton	14,800	14,225
Ritz-Canton	5,600	5,625
Graber	2,800	3,075
Hollow-Nikkel	2,850	2,850
Lerado	1,850	2,350
Voshell	2,150	2,175
Wellington	2,825	2,600
Ellsworth County:		
Lorraine	4,250	4,700
Other pools	1,305	1,305
Rice-Barton counties:		
Bloomer	3,900	4,125
Chase	7,375	8,300
Geneseo	1,825	2,425
Raymond	2,575	1,625
Silica	18,875	17,650
Keesling	1,650	1,750
Hauschild	1,800	2,575
Miscellaneous Rice	11,070	10,000
Miscellaneous Barton	5,300	5,390
Russell County:		
Fairport	2,060	2,240
Gorham-East Gorham	2,020	1,875
Russell	1,920	2,280
Sullivan	7,540	8,450
Trapp	9,695	10,295
Miscellaneous Russell	7,270	6,715
Sedgwick County:		
Valley Center	1,220	1,265
Miscellaneous	3,065	3,100
Ellis County:		
Bemis	4,850	3,525
Miscellaneous	3,380	3,230
Kingman County	575	580
Stafford County	3,410	3,280
Greenwood County	9,575	9,575
Butler County	15,975	16,000
Other fields	25,070	26,120
Total Kansas	192,175	193,000

Rooks County

Basin Oil Co. No. 1 Baxa, NE cor. section 23-9-17w, Rooks County wildcat, had Simpson formation at 3,620-30 feet, total depth, and was dry and abandoned. Phillips Petroleum Co. No. 1 Mainquist, SW SW NW section 9-9-17w, was dry and abandoned at 3,515 feet, total depth. Bronson and others No. 1 Casey, section 22-9-16w, was abandoned at 3,712 feet, total depth.

Reno County

National Petroleum Co. No. 6 Tucker, SW SW NE section 19-24-4w, Burrton area, Reno County, had Chat at 3,328-87 feet, total depth, and made potential of 1,570 bbls. of oil. Carter Oil Co. No. 6 Hogan, C SW section 19-24-4w, was bottomed at 3,390 feet, swabbed 95 bbls. of oil in seven hours, was acidized and pumped and flowed 257 bbls. of oil and 57 bbls. of water in 24 hours.

Joe Triplett, drilling tool superintendent, Magnolia Petroleum Co., Wichita, Kans. The picture was taken in Barton County, Kansas

Magnolia Petroleum Co. No. 5 Rogers, NW SW SW section 9-26-4w, had Viola lime at 4,028-32 feet, total depth, flowed 106 bbls. of oil in 12 hours and made potential of 560 bbls.

Other Reno County completions: Sinclair Prairie Oil Co. No. 2 Showalter, section 8-24-4w, total depth 3,382 feet, potential 300 bbls. Same company's No. 3 Kaufman, section 18-24-4w, total depth 3,389 feet, potential 818 bbls. Carter Oil Co. No. 5 Hogan, section 19-24-4w, total depth 3,390 feet, potential 404 bbls. Shell Petroleum Co. No. 9 Whipple, section 15-26-9w, had Viola lime at 4,138 feet, total depth 4,142 feet, potential 2,209 bbls.

National Petroleum Co. No. 8 Tucker, SW SE NW section 19-24-4w, was rigging up rotary.

Harvey County

Hipple and others No. 2 Norris, NE NW SW section 30-23-3w, Harvey County sector of the Burrton field, topped Chat at 3,275 feet, total depth 3,373 feet, was acidized and flowed 967 bbls. of oil in 24 hours.

Olson Drilling Co. No. 4 Nelson, SW SE NW section 30-23-3w, was bottomed at 3,370 feet and made potential of 801 bbls. of oil.

New work in Harvey County: Derby Oil Co. No. 1 Lehman, SW SW NW section 13-22-2w, building rig; Tom Palmer No. 1 Murphy, SW SW SE section 30-23-3w, drilling at 2,160 feet; Tom Palmer and others No. 1 Schrag, NW NE NW section 31-23-3w, location.

Stafford County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Fitzgerald, SW SE SE section 22-24-13w, St. John pool, Stafford County, found Siliceous lime at 4,116 feet, total depth 4,126 feet, plugged back to 4,122 feet and made potential of 1,171 bbls. of oil, with 292 bbls. of water.

Other recent Stafford County completions: Empire Oil & Refining Co. No. 1 Stinatze, section 15-25-14w, total depth 3,809 feet, potential 1,088 bbls. of oil. Atlantic Refining Co. No. 1 Katchelman, section 13-25-14w, total depth 4,340 feet, abandoned. Empire Oil & Refining Co. No. 2 Benton, section 23-24-13w, total depth 4,160 feet, abandoned. Stanolind Oil & Gas Co. and others No. 2 Allen, section 31-22-11w, total depth 3,580 feet, potential 1,312 bbls. of oil.

Two new tests in Stafford County were reported. Newman & Winemiller No. 1 Sittner, NE cor. section 33-21-12w, was a rotary rig. Skelly Oil Co. and others No. 1 Gunder, NW cor. section 22-25-14w, was a location.

McPherson County

Continental Oil Co. and others No. 7 Hetzke, C W half E half NE section 29-21-1w, Graber pool, McPherson County, was bottomed at 3,320 feet, acidized and made potential of 756 bbls. of oil.

Joe Rush and others No. 1-K Robinson, NW SW SW section 10-19-2w, was dry and abandoned at 3,005 feet, total depth.

Johnson No. 2 Good, section 13-19-3w, total depth 2,350 feet, made potential of 101 bbls. of oil. Continental Oil Co. No. 3 Kindblade, section 20-21-1w, total depth 3,326 feet, made potential of 682 bbls. of oil.

Clyde Pulse and others No. 1 Boesker, SE SE NW section 29-20-1w, McPherson County wildcat, was moving in material.

Sedgwick County

Prunty Production Co. and others No. 1 Smith A, NW NW SE section 16-25-1e, Goodrich pool, Sedgwick County, was bottomed at 3,344 feet, swabbed 73 bbls. of oil and 50 bbls. of water in 24 hours, was acidized and pumped 580 bbls. of oil and 360 bbls. of water daily.

W. G. Talbott and others No. 1 Downs Estate, SE SE NW section 32-28-2e, wildcat, was a location.

Sumner County

Texas Co. No. 6 Carr, NE SE NE section 5-32-1w, Wellington pool, Sumner County, had Chat at 3,648 feet, total depth 3,693 feet, was acidized and pumped 448 bbls. of oil and 30 bbls. of water daily.

Steibar Oil Corp. No. 17 Erker, section 33-31-1w, made potential of 1,360 bbls. of oil at 3,671 feet, total

(Continued on Page 104)

Central West

By STAFF CORRESPONDENT

SHALLOW SANDS OF MARION COUNTY YIELD GOOD WELLS

MATTOON, Ill., July 12.—Four wells were completed in the Illinois fields in the past week. In Clinton County Timberlake and others No. 1 Bergman, SE cor. NW NW section 8-1n-3w was shot with 20 quarts of nitroglycerin at 1,049-64 feet, and the well responded with a 35-bbl. production on the pump. Oil sand lay at 1,064-72½ feet, total depth.

In Wayne County Pure Oil Co. No. 1 Brach, NW NW SW section 26-1n-7e, made an 85-bbl. well. It had been shot with 10 quarts at 3,071-76 feet, and with 20 quarts at 3,094-3,104 feet, and later given acid doses of 42 gallons, 250 gallons and 500 gallons. Total depth is 3,119½ feet. In the same county Pure Oil Co. completed No. 1 Stella Billington SE SE NE section 27-1n-7e. It makes a 50-bbl. well with a showing of salt water. Total depth is 3,138 feet but it was shot at 3,082-86 feet and 3,110-22 feet. The Pure Oil Co. has spent much time and money in testing this well which was a disappointment when it failed to produce from McCloskey sand several weeks ago.

Two completions were reported from Marion County, the busiest area in the state. Cypress Oil & Gas Co. No. 1 Adams, NW cor. SE SW section 28-4n-1e, made a 200 bbl. well on the pump without having been shot. It is producing from Benoist sand at 1,448-52 feet.

Adams Oil & Gas Co. and Felmont Corp. No. 7 Merryman, CNL NW NW section 28-4n-1e, was shot with 15 quarts at 1,411-19 feet, and started at 200 bbls. a day on the pump. Benoist sand was penetrated at 1,397-1,420 feet.

The status of drilling wells in the Basin was as follows by counties:

Marion County, Adams Oil & Gas Co. and Felmont Corp. No. 1 Anna L. Davidson, NW cor. SW SE section 21-4n-1e set 5½ inch casing at 1,566 feet and ran 5-inch liner from 1,599 to 1,607 feet and was testing Roseclaire sand, which showed good saturation at 1,586-1,607½ feet. Benoist sand at 1,420-1,464 feet showed poor saturation but Stein sand at 1,297-1,313 feet was well saturated. The same companies' No. 2 Anna L. Davidson SW cor. SE section 21, was also testing Roseclaire, which showed good saturation at 1,587-1,605 feet. Six and five-eights inch casing was set at 1,593 feet. Benoist sand in this well showed poor saturation.

Hempen & Burgess No. 1 Prime, SW cor. NE SE section 28-4n-1e, was drilling at 1,047 feet. Frank Frederick and others No. 1 Hill, NE cor. SE SW section 28-4n-1e, had materials on the ground. Schlossberg & Sigel No. 1 Roddy, SW cor. SE SW section 20-2n-3e was shut down while the crew was making repairs. Adams Oil & Gas Co. and Felmont Corp. No. 1 Wassem, CSL SE NW section 28-4n-1e was drilling at 1,290 feet. Brown and others No. 1 Bachman, NW NW SE section 22-4n-1e, set 8-inch casing at 1,240 feet, total depth 1,280 feet, and the crew was cleaning out. Adams Oil & Gas Co. No. 1 Ainscough, NW cor. NE section 28-4n-1e had Roseclaire sand at 1,598-1,610 feet with good saturation. Casing, 5½-inch, was set at 1,607 feet and cement was being drilled. Eddington, Baldwin & Parker No. 1 Nichols, SE quarter section 12-4n-4e, was drilling at 2,230 feet. Hempen & Burgess No. 1 Joliff, NE NW SE section 28-4n-1e, missed Benoist sand and was drilling at 1,520 feet. C. G. Evans No. 1 Allison, CNL NW SW section 33-4n-1e was underreaming 6-inch casing at 1,453 feet.

Clay County

Pure Oil Co. was drilling at 2,887 feet in No. 1 B. W. Mosely, NE NW NE section 4-2n-8e, Clay County. Same company was drilling at 2,087 feet in No. 1 Nicholas Mosely, C SE SW NE section 33-3n-8e and drilling at 2,335 feet in No. 2 Sarah Bechtel, C SW SW NE section 33-3n-8e and at 2,172 feet in No. 1 Albert Travis, SE NE NW section 33-3n-8e. Wiser Oil Co. was drilling at 1,590 feet in No. 1 D. Smith, SW SE NE section 28-3n-8e. Wicklund Development Co. set 10¾-inch casing at 200 feet in No. 1 Sanford (Brissenden) SE SE NW section 29-3n-8e.

Fayette County

In Fayette County Milliken & Rush were drilling at 2,076 feet in No. 1 Bahde, NW NW SW section 16-5n-3e. Beaton & Ryer were drilling at 1,143 feet in No. 1 Thompson, NW NW NE section 20-4n-1w. John Farelly No. 1 Lilly, SE cor. SW SE section 16-8n-3e set 16-inch casing at 85 feet and the crew was cleaning out cavings.

Wayne County

Washburn Petroleum Co. was drilling at 308 feet in No. 1 Acola, NW NE NW section 31-2s-6e, Wayne County. Mammoth Producing & Refining Co. set 10¾-inch casing at 340 feet in No. 1 D. S. Garrison, NW NW NE section 11-1s-7e. Pure Oil Co. No. 1 C. H. Billington SE SE SE section 27-1n-7e, was drilling at 881 feet.

Randolph County

Mabee and others No. 1 Wilson, CSL NE SE NE section 3-4s-4w was drilling at 1,255 feet. Hood and others No. 1 J. S. Burns, SE cor. NE SW section 31-4s-5w, was drilling at 500 feet.

Effingham County

W. H. Hazlett No. 1 Haarman, NE cor. section 5-7n-6e, Effingham County, was drilling at 2,106 feet.

Richland County

Ohio Oil Co. was drilling at 250 feet in No. 1 Arbuthnot, NW NW NW section 8-3n-9e.

Washington County

Milliken and others No. 1 Lesserman, NW NW NW section 36-1n-2w Washington County was shut down at 175 feet, while the crew was making repairs. This well was reported last week as Lambert & Giffert.

Edwards County

Leach Bros. No. 1 A. D. Lee, C NW NE SE section 11-1s-10e, was drilling at 133 feet.

Clinton County

Adams Oil & Gas Co. No. 1 Brammeier, SW cor. NE SW section 2-1n-2w, Clinton County, set 7-inch casing at 132 feet.

Perry County

H. H. Forrester was drilling at 5,019 feet in No. 1 fee, C W half S W NW section 11-3n-12w, Perry County.

Clark County

National Consumers Oil Co. was drilling below 1,946 feet in No. 1 NW NE NW section 21-11n-12w, Clark County.

OHIO

TOLEDO, Ohio, July 12.—The number of completions in Ohio during the past week was more or less average. No especially large wells were reported.

In northern Ohio, operations seem particularly slow, with only a few completions. In Lorain County, the Ohio Fuel Gas Co. No. 1 Anthony Forthofer, in section 21, Avon Township, was a 1,100,000-foot gasser in the Clinton sand. Obermiller & Co. No. 1 C. and F. Bremmap, section 8, Jackson Township, Stark County, made 961,000 feet of gas in the Clinton from 4,058 feet to 4,073 feet.

A. C. Leathers & Co. No. 1 Charles Blatt was completed at 865 feet. A show of gas was encountered in the shale, and it was shot, gauging 7,000 feet of gas 30 minutes after shot. The well was shut in. The gas was encountered at a depth of 285 feet. The same company's No. 1 L. M. Chapin was finally completed at a depth of 844 feet. The well gauged 240,000 feet of gas. In Peru Township, Huron County, White and others are drilling No. 1 Peter Arting in brown shale at a depth below 2,420 feet.

In northwestern Ohio, the Packer Creek Oil Co. No. 1 Ed Stresher, in section 36, Clay Township, Ottawa County, made 326,000 feet of gas from the Trenton at 1,286-1,385 feet. The well was shot and shut in with 340 pounds rock pressure.

In section 25, Liberty Township, Seneca County, Zasing and others completed No. 4 Eli Rosenberger in the Trenton at 1,490-95 feet. The oil production was estimated at 125 bbls., with 125,000 feet of gas.

In Licking County, Rutlege & Mosholder No. 7 William Teagarden in Perry Township, was completed as an oil well in the Berea from 616-26 feet. The well made 5 bbls. the first 24 hours after it was shot. In section 10 of Fallsbury Township, in the same county, the Emerald Petroleum Co. completed their No. 4 Arlie M. Cochran in the Berea sand at 717-25 feet. The well made 2 bbls. of oil the first 24 hours after shot.

In Monroe County, Stout & Shafer completed a small gas well on their No. 4 Frank Starkey, section 4, Adams Township, in Berea sand at 2,259-70 feet. The well was shot and gauged 134,000 feet with a rock pressure of 510 pounds. A flow of 319,000 feet of gas was encountered in the Keener sand, but it quickly blew down to 40,000 feet. In section 5, Bethel Township, in the same county, the Bay Oil & Gas Co. completed No. 6 Homer J. Burkhart when 105,000 feet of gas was encountered in the First Salt sand at 1,060-80 feet. The well, however, was drilled on through to the Injun sand where neither gas, oil nor water was found, to a depth of 1,528 feet. The well was then plugged back and completed as a commercial well in the Salt sand.

In Washington County, Hall & Henning completed No. 5 J. W. Pryor in section 21, Grandview Township, as a commercial gas and oil well. The Keener sand was encountered at 1,603-19 feet, total depth 1,625 feet. The well gauged 100,000 feet of gas and made 6 bbls. of oil the first 24 hours after it was shot. In section 26 of the same township, Graham & Rinard No. 1 A. D. Heddleston was abandoned as dry at 1,803 feet. The well gauged 31,000 feet of gas but was not considered a commercial producer. It was drilled through the Squaw sand, which was encountered at 1,764-79 feet, and through the Injun sand, found at 1,625-1,764 feet. In section 35, Newport Township of the same county, Frank Kerr No. 21 Ella West made a three-quarters barrel well after it was shot in the Peeker sand at 720-74 feet. In section 30 of Wesley Township, in the same county, W. W. Waterson completed two dry holes, Nos. 14 and 15, on the E. Ray Evans farm. No. 14 encountered no First Cow Run sand, and was drilled to a total depth of 585 feet. No. 15 encountered First Cow Run sand at 501-07 feet. The well was abandoned as a dry hole at a total depth of 581 feet. In the same township, Bachelor & Sons No. 14 Ed Sheets, in Lot 1098, made 3½ bbls. of oil at 515-37 feet, total depth 537 feet.

In Meigs County, T. J. Chase No. 2 E. F. Harrison, section 3, Rutland Township, was a commercial well in the Maxton sand at 782-93 feet. The well gauged 150,000 feet of gas, with 260 pounds rock pressure. In Lebanon Township of the same county, J. I. Clark and others completed a gas well, No. 4 Schuyler S. Bush, in the First Berea sand at 1,975-81 feet. The well was shot and shut in, good for 196,000 feet and a rock pressure of 560 pounds. Also in Meigs County, in Salisbury Township, Joe Rubin abandoned a dry

(Continued on Page 96)

Oklahoma Operations

By
DAL DALRYMPLE

EXTEND JESSE NORTHWEST; BILLINGS FIELD IS ENLARGED

The Jesse pool was extended in two directions, big Hunton lime production was found on the west side of the Fitts field, a westward extension for the Billings area was indicated, and a Pottawatomie County wildcat was showing as a fair producer to feature a busy week in Oklahoma oil sectors.

Carter Oil Co. No. 1 Nix, C W half SW NE section 1-1n-7, extended the Jesse area more than one-half mile northeast. After lime was acidized at 4,002-20 feet, it flowed 502 bbls. of oil in 18 hours, then 440 bbls. in 17 hours and was shut in for tankage.

Francis Oil & Gas Co. and others No. 1 Province, SW NW NW section 2-1n-7, one-half mile northwest of Jesse, swabbed 22 bbls. of oil an hour while fishing for bailer and had 1,400 feet of oil in the hole. The showing was after plugging back to Gilcrease sand at 1,865-1,930 feet. This test is thought to be on the north flank of the connecting Jesse and South Fitts trend and may aid in determining the expected link between the two sectors.

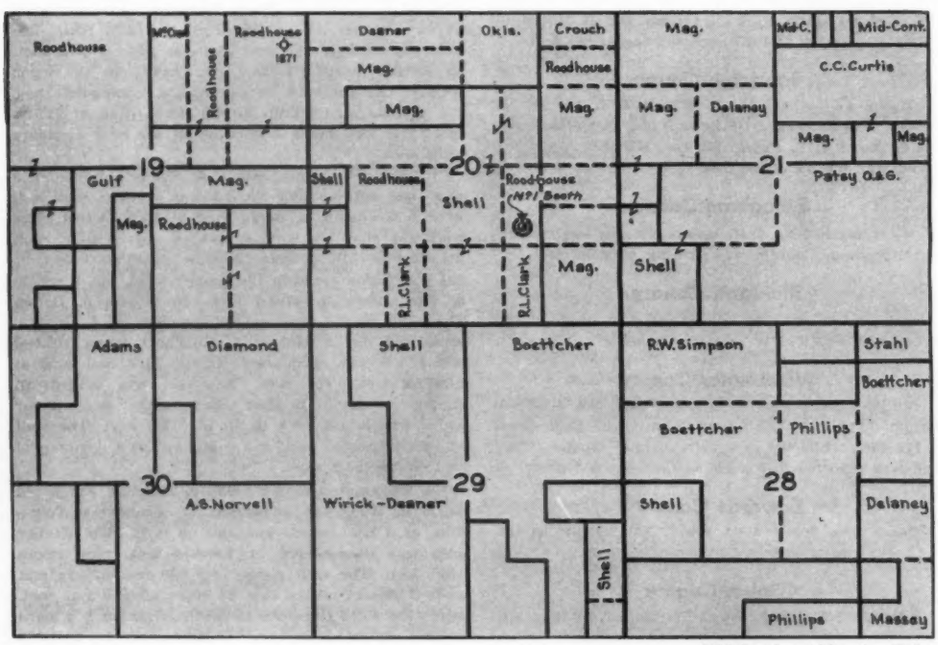
Mid-Continent Petroleum Corp. No. 5 Statler, SW NE SW section 2-1n-7, on the west edge of Jesse, flowed 2,187 bbls. of oil in 3 hours and 50 minutes. It had Bromide pay at 4,522-32 feet, total depth.

At the west edge of the Fitts field E. H. Moore, Inc. had a good producer at No. 9-B Smith, SW SE SE section 25-2n-6. Bottomed at 3,635 feet in Hunton lime, it flowed 165 bbls. of oil an hour through tubing for two and one-half hours after acidizing. Prospects for further development on the west side of this busy Pontotoc County field are enhanced by this showing. On the north edge of the main Hunton lime zone at Fitts, Navarro Oil Co. has a big well at No. 4 Horn, SE NE NE section 22-2-7. It was tested at 3,888 to 3,914 feet and made potential of 3,470 bbls. of oil naturally through tubing.

Northwest of the Fitts field, C. W. Roodhouse and others No. 1 Booth, SE NW SE section 20-2n-6, wildcat, continued to swab and was showing a small amount of oil, but failed to recover oil load after reacidizing. It topped Bromide at 4,821 feet, water intruded at 4,966 feet, total depth, and it was plugged back to 4,400 feet and acidized twice.

Southwest of Tecumseh in Pottawatomie County, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Billington, SW SE SW section 32-9-3e, wildcat, acidized Dolomite at plugged back depth of 5,238 feet and flowed 273 bbls. of oil, partly oil load, in five hours, later settling to around 50 bbls. of oil an hour.

Tide Water Associated Oil Co. No. 4 Shaffer, NE NW SW section 21-23-2w, was due to extend the Billings pool, Noble County, slightly to the west. It was showing oil when operators started to drill in under pressure at 4,345 feet. On the rich McCaughtry lease in the Billings field, Phillips Petroleum Co. and Shell Petroleum Corp. No. 13 McCaughtry, SW NW NE section 21-23-2w, was bottomed at 4,310 feet in Wilcox sand and flowed 150 bbls. of oil an hour, with 2,800,000 feet of gas, before being shut in to run tubing.



Mid-Continent Map Co., Tulsa

C. W. Roodhouse and others No. 1 Booth is given chance to open new area in section 20-2n-6e, Pontotoc County

Additional tests were being started in the new area recently opened in Stephens County, near Doyle, by Helmerich & Payne and associates. The discovery operators have started work at No. 1-A Wade, NW NW SE section 12-1n-5w, south offset to the discovery, and at No. 1-B Wade, NE SE NW section 12-1n-5w, diagonal northwest offset. Texas Co. had begun work at No. 1 Graham, SE SW NE section 12-1n-5w.

The closely watched wildcat in southern Stephens County, Carter Oil Co. and others No. 1 Harley, C NE NE section 24-2s-4w, was drilling ahead below 7,100 feet in shale and Dolomite and expecting to find the deep pay at any time. It was running considerably higher geologically than the deep discovery well in the Fox field, to the east in Carter County.

Oklahoma County

The largest of four wells completed in the Oklahoma City field was Anderson-Kerr Drilling Co. No. 1 fee, NW NW SE section 27-12-3w. It had Wilcox sand at 6,384 feet, total depth 6,551 feet, and made potential of 5,288 bbls. of oil on gas lift and Reda pump. Same operator's No. 2 Community, NW SW SE section 27-12-3w, made potential of 5,218 bbls. of oil on gas lift and Reda pump from Wilcox sand topped at 6,384 feet, total depth 6,540 feet. The company's third completion of the week was No. 1 Community, NW SW SE section 27-12-13w, which found Wilcox sand at 6,394 feet and was bottomed at 6,560 feet. It made 24-hour potential of 3,250 bbls. of oil on gas lift and Reda pump.

Inland Development Co. No. 2 Harn, SE SE NW section 27-12-3w, topped second Wilcox sand at 6,495 feet, total depth 6,533 feet, and made potential of 689.24 bbls. of oil on gas lift.

In the Edmond field, Ohio Oil Co. No. 4 McMillan, SE NW SW section 31-14-3w, found first Wilcox sand at 6,615 feet, second sand 6,690 feet, and was bottomed at 6,700 feet. It flowed 40.14 bbls. of oil in four hours, making potential of 241.20 bbls. Gas gauged 2,200,000 feet daily.

Estimated Daily Production

Estimated daily production of Oklahoma for the week ending July 10, and for the preceding week, was as follows:

	Barrels	
	July 10	July 3
Allen	5,375	5,475
Billings	6,625	7,875
Burbank	7,750	8,200
South Burbank	15,750	16,100
Balance Osage	21,250	21,800
Blackwell district	5,700	5,675
Bristow-Slick	7,550	7,800
Chandler	3,025	3,000
Crescent	9,725	8,000
Cromwell	3,325	3,350
Cushing-Shamrock	10,250	10,750
Duncan district	3,950	3,975
Edmond	18,500	19,250
Fish	6,250	6,375
Fitts	85,450	91,500
Jesse	3,050	2,250
Graham	4,500	4,525
Gray	1,125	1,175
Healdton	10,400	10,300
Hewitt	4,375	4,350
Holdenville	925	925
Keokuk	8,950	8,900
Konawa	1,525	1,650
Lucien	15,900	15,750
Moore	10,250	13,500
Oklahoma City	149,150	140,575
Olympic	13,450	13,475
Polo	1,025	1,100
Sasakwa and townsite	2,625	2,750
Sholem-Alechem	3,200	3,200
Seminole:		
Bowlegs	11,475	11,575
Carr City	5,650	5,625
Earlsboro	6,400	6,325
South Earlsboro	675	725
East Earlsboro	7,050	7,375
Little River	11,100	10,725
East Little River	1,075	1,075
Maud	725	750
Mission	2,175	2,150
Seminole	9,050	9,275
East Seminole	3,000	2,950
Searight	4,625	4,600
Total Seminole	63,000	63,150
St. Louis-Pearson	20,675	20,225
Tatums	5,700	5,750
Tonkawa-Garber-Thomas	4,925	4,975
Wewoka	3,225	3,325
Yale-Jennings	4,250	4,225
Other pools	75,600	74,400
Total Oklahoma	618,300	619,600

Osage County

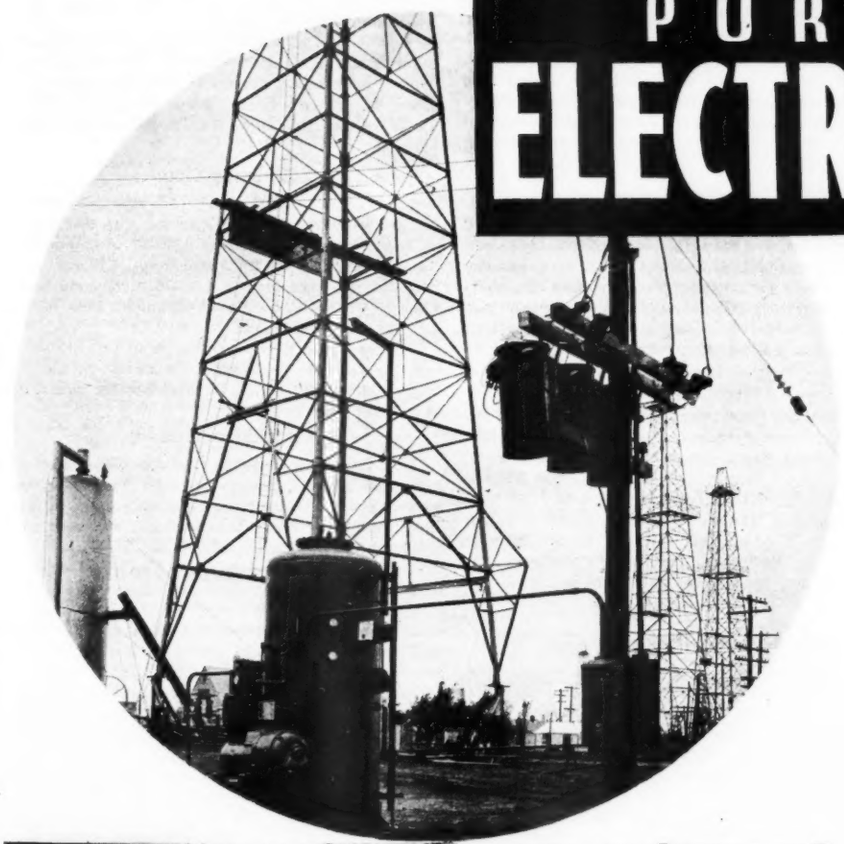
Lewis Production Co. No. 9 Osage, SW SW SE section 28-24-7, Naval Reserve area, Osage County, topped Bartlesville sand at 2,535 feet, total depth 2,622 feet, was shot and had initial production of 77 bbls. of oil daily.

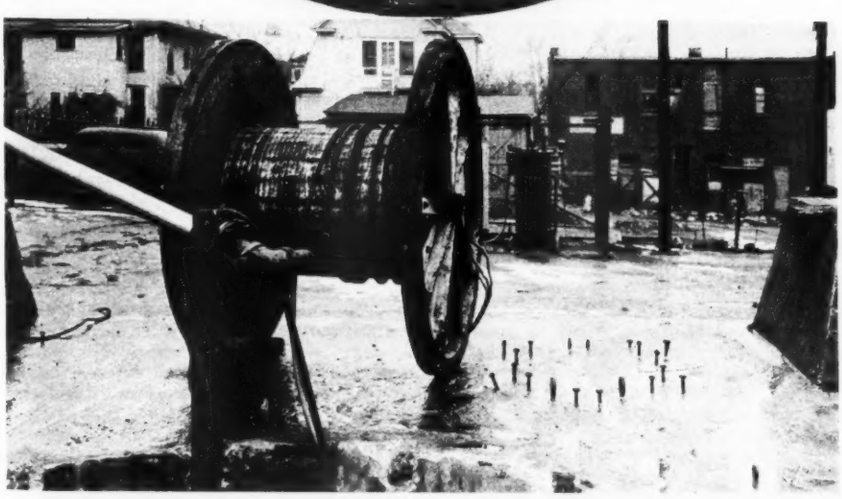
Peters Petroleum Co. and Norbla Oil Corp. No. 1-A Osage, SW SE NW section 28-24-8, had a hole full of

Pump Your Allowable for only 2¢ to 3¢ per barrel!

WITH . . . .

PURCHASED ELECTRIC POWER





An accurate survey of almost 200 wells serviced with Electric Power by the Oklahoma Gas and Electric Company reveals that the average lifting cost over a long period of time amounts to only 2c to 3c per barrel.

This low pumping cost is augmented by a low installation cost, extreme portability and greater salvage value of Electrically Powered Equipment. ***The result: Purchased Electric Power is more efficient and the cost is less!***

Investigate now. Ask our engineers —no obligation!

PROFIT BY USING Purchased ELECTRIC POWER

OKLAHOMA GAS AND ELECTRIC COMPANY

Commercial Department

OKLAHOMA CITY — W. H. STUEVE — OKLAHOMA

water and was dry and abandoned in Arbuckle lime at 2,687-2,701 feet, total depth.

Mason & Carter No. 9 Osage, SE SE NE section 23-21-8, was shot and pumped 4 bbls. of oil daily at total depth of 1,215 feet.

New work in Osage County: W. C. McBride No. 1 Osage, SW NW NW section 16-23-10, location; Continental Oil Co. No. 1 Osage, NE NE NW section 29-24-9, location; Lewis Production Co. No. 4 Osage, SW NW SW section 27-24-7, cellar and pits.

Noble-Logan Counties

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 5 Kolb, SW SW NW section 33-20-2w, Lucien field, Noble County, had first Wilcox sand at 4,942-95 feet, topped second Wilcox sand at 5,055 feet and was bottomed at 5,117 feet. It flowed 190 bbls. of oil in 21 hours, later flowed 58.17 bbls. in two hours of potential test and died. Potential was estimated at 109 bbls. of oil.

Sinclair Prairie Oil Co. No. 4 Shaffer, SE NE SW section 28-17-4w, Crescent area, Logan County, flowed 151.73 bbls. of oil in four hours and made potential of 690.64 bbls. Gas gauged 7,433,000 feet. Top of first sand was 6,465 feet, total depth 6,504 feet.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 8 Pfeiffer, SE SW SW section 33-20-2w, Logan County side of the Lucien field, was a location.

Kay County

Shell Petroleum Corp. and Continental Oil Co. No. 6 Biddle, NE NE SW section 5-28-1w, Braman area, Kay County, had Layton sand at 2,741 feet, total depth 2,780 feet, and flowed 177 bbls. of oil through tubing in 24 hours.

Lincoln County

Ross Oil Co. No. 1 Bailey, SE cor. section 22-15-6, wildcat near Stroud, Lincoln County, had Cleveland sand at 2,205-53 feet, total depth, and produced 2,000,000 feet of gas, completed, with 800 pounds casing pressure.

Two new operations in Lincoln County were reported. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 2 Sporn, SE NE SE section 20-17-3e, was building rig. Helmerich & Payne No. 1 Fitch, SW SW NE section 15-14-6, was a location.

Creek County

Sinclair Prairie Oil Co. No. 3 Oates, SW SE NE section 14-19-9, Creek County, flowed 25 bbls. of oil through tubing in 24 hours and was completed at 1,304 feet, total depth. It had Cleveland sand at 2,215-98 feet.

Sparton Supply Co. No. 3 Nichols, CEL SE NE section 12-18-11, was dry and abandoned when water intruded at 1,717-34 feet, total depth.

Link Oil Co. No. 11 Jones, C E half E half NE section 32-18-7, an old well was deepened from 1,428 feet to Bartlesville sand at 2,536 feet, total depth 2,620 feet, pumped 30 bbls. of 40 gravity oil daily and was recompleted.

New work in Creek County: Tibbens Estate No. 2 Wilson, NW SW NE section 18-14-9, an old well being deepened, was drilling at 1,212 feet; Bruin Oil Co. No. 1-A Harjo, SE SE NW section 27-14-10, drilling at 1,950 feet; Emmett Adams No. 3 Self, C W half SW NW section 2-17-10, was shut down at 810 feet.

Tulsa County

Burton Holmes and others No. 2 Graves, SE NW SE section 30-19-10, Keystone area, Tulsa County, had Red Fork sand at 2,230 feet, total depth 2,258 feet, plugged back to 2,251 feet, was shot and pumped 10 bbls. of oil daily.

B. Roberts and others No. 1 Roberts, NW NE SE section 27-19-10, was dry and abandoned at 2,040 feet, total depth.

Superior Oil Corp. No. 8 Easley, SE NW NW section 7-19-10, Tulsa County, was drilling with machine at 764 feet.

Muskogee-Wagoner Counties

J. E. Pitts No. 1 Childers, C NW NE section 27-17-15, Wagoner County, was rigging up machine.

Conrad Lambert was rigging up machine at No. 3 Sommers, C W half NW NE section 6-15-15, Muskogee County.

Okmulgee County

Two new tests in Okmulgee County were reported. J. L. Selby No. 3 Grayson, C W half NW NE section 3-14-14, was drilling at 110 feet. E. W. Ladd No. 1-A Gallagher, NE SW SW section 23-14-14, was a location.

Okfuskee County

Hayes & Scruggs No. 1 Barnett (Kennedy), SW SW SE section 21-10-11, Weleetka area, Okfuskee County, was completed at 2,633 feet, total depth, in sand, with production estimated at 12,000,000 feet of gas daily.

E. H. Moore and others No. 1 Littrell, NW NE SE section 29-10-11, topped Cromwell sand at 3,010 feet, had a hole full of water at 3,022 feet and was dry and abandoned at 3,170 feet, total depth.

Garfield County

Ohio Oil Co. No. 1 State, SW SW SW section 13-23-3w, wildcat in Garfield County and west of the Billings field, bailed water and was dry and abandoned at 5,200 feet, total depth. It topped Pawhuska at 2,260 feet, Oread 2,655 feet, Avant 3,370 feet, Layton 3,675 feet, Cleveland 3,925 feet, Oswego 4,150 feet, Mississippi 4,470 feet, Chattanooga shale 4,535 feet, Viola 4,577 feet, Dolomite 4,615 feet, first Wilcox sand 4,629 feet, based second Wilcox sand and topped Tyner at 4,780 feet, topped Arbuckle lime at 5,000 feet, and plugged back to 4,570 feet, shooting and acidizing without results.

Alfalfa County

Olson Drilling Co. and associates No. 1 Acre, C SW NE section 14-24-11w, an old wildcat in Alfalfa County that originally bottomed at 7,332 feet, was dry and abandoned after plugging back, cleaning out, swabbing and other methods to make a producer were unsuccessful. A long fishing job developed and the hole was junked at 4,278 feet.

Pontotoc County

First reports of new work in Pontotoc County follow: Mid-Continent Petroleum Corp. No. 7 Statler, NW NW SW section 2-1n-7, Jesse area, was a rig; E. H. Moore, Inc., No. 1 Norris, NW NE NE section 35-2n-6, an old well, plugged back from 4,440 feet to 3,993 feet, shot, acidized and waiting on results; Magnolia Petroleum Co. No. 3 Lewis, SE SW SW section 19-2n-7, cellar and pits; Bishop Oil Co. No. 3-B Simpson, SW NW NW section 28-2n-7, set 10¾-inch casing at 480 feet, waiting on cement, total depth 500 feet.

Seminole County

The following new operations were reported in Seminole County: Stanolind Oil & Gas Co., Amerada Petroleum Corp. and Mid-Continent Petroleum Corp. No. 1 Salina, SE NE NW section 4-5-6, wildcat, cellar and pits; Indian Territory Illuminating Oil Co. No. 1 Mathis, NE NW SW section 13-5-7, an old well, plugged back from 4,287 feet to 4,272 feet, perforated casing, acidized, swabbed 68 bbls. of oil net in 24 hours, putting on pump; Paul Traugh No. 4 Williams, SW SE NE section 22-6-6, building rig; J. F. Smith No. 1 Huddleston, NE SE NW section 32-7-6, location; Winona Oil Co. and Empire Oil & Refining Co. No. 1 Keys, NW NE NE section 19-7-8, cellar and pits.

Pottawatomie County

Atlantic Refining Co. and others No. 2 Standridge, NW SW SW section 10-7-4, St. Louis district, Pottawatomie County, an old well, was plugged back from 3,954 feet to 3,565 feet, ripped casing, shot, flowed 40 bbls. of oil in 24 hours and was cleaning out.

Carter County

Snowden & McSweeney No. 28 Apple & Franklin, NE SW NE section 9-4s-3w, Carter County, pumped 37½ bbls. of oil daily and was completed at 1,085 feet, total depth.

Shell Petroleum Corp. No. 51 McClure, NE NE SW section 5-4s-3w, had pay at 1,060-97 feet, total depth, and pumped 35 bbls. of oil daily.

Cox & Hamon No. 3 Jackson, SE SE NW section 15-4s-2w, an old well, was deepened from 2,212 feet to 2,574 feet, pumped 25 bbls. of oil daily and was recompleted.

New work in Carter County: Gulf Oil Corp. and others No. 1 C. R. Smith, C SW SW section 26-2s-3w, pits; Cox & Hamon No. 10 Jackson, SE SE NW section 15-4s-2w, machine on location to deepen old well; Rockland Oil Co. No. 57 Sarasota, NE NW NE section 23-4s-3w, drilling at 50 feet.

Grady County

T. H. McCasland No. 2 White Eagle, NE NW SW section 27-3n-5w, Knox field, Grady County, was dry and abandoned at 2,732 feet, total depth in brown shale.

Doyle Petroleum Co. No. 1 Huffine, NW NW SE section 30-5-8w, Grady County wildcat, was building derrick.

Stephens County

Helmerich & Payne and others No. 1-A Graham, SW SW NE section 12-1n-5w, wildcat in the Doyle area, Stephens County, was completed as a new pool opener, producing through perforated casing from 3,784-3,800½ feet. It flowed as high as 410 bbls. of oil in 24 hours through tubing. It originally was bottomed at 5,014 feet, and plugged back to 3,850 feet.

George L. Pace and others No. 1 Allen, NE SE NE section 3-2s-8w, Empire area, had sand at 2,147-62 feet, total depth 2,166 feet, and pumped 40 bbls. of oil daily.

McGraw Oil Co. No. 13 Elmore, SW SW NW section 24-2s-4w, was completed as a 7-bbl. pumper at 605 feet, total depth in sand.

New work in Stephens County: Westheimer and others No. 1-A Stephens, SW SW SW section 3-2s-5w, drilling at 330 feet; George L. Pace and others No. 12 Allen, SE SE NE section 3-2s-8w, drilling at 1,708 feet; Texas Co. No. 1 Graham, SE SW NE section 12-1n-5w, location.

Jefferson County

Bridwell Oil Co. No. 17 Wahlgemuth, NE SE NW section 30-6s-5w, Jefferson County, was completed as an 80-bbl. pumper in lime at 1,827-37 feet, total depth. Same company's No. 15 Wahlgemuth, NW cor. section 30-6s-5w, was bottomed at 1,535 feet, plugged back to 1,504 feet, pumped 5 bbls. of oil and 10 bbls. of water daily and was completed.

Palmer and others No. 3 Grayson, SW SE SW section 19-6s-5w, was a location. Bridwell Oil Co. No. 6 Barnett, NW NW SE NE section 30-6s-5w, was drilling at 550 feet.

Beckham County

Bud Lewis No. 1 Douglas, C SE NE section 21-8-26w, was location for a wildcat in Beckham County, southwest of Erick and southeast of Texola.

Central West Fields

(Continued from Page 93)

hole, No. 2 Philip Heilman in section 36. The Maxton sand was encountered at 1,099-1,147 feet, with a hole full of water.

In Athens County, Williams Bros. completed No. 3 Grace Leslie and others in section 16, Rome Township, when 200,000 feet of gas was encountered in the Salt sand at 764-81 feet.

The Hope Construction & Refining Co. abandoned No. 8 Joe Varner in section 3, Licking Township, Muskingum County. The Clinton sand was encountered at 3,170-3,205 feet. The well made 4 bbls. of oil and 12,000 feet of gas after it was shot, but was not considered of commercial value. In the same county, Wilbur Swingle No. 3 Ernest Epply in section 3, Brushcreek Township, was abandoned after showing 40,000 feet of gas in the Clinton sand, 4,040-65 feet, total depth 4,150 feet.

In Guernsey County, Wilbur Keith completed a dry hole on the M. R. Cherry farm in section 9, Jefferson Township. Berea was found at 1,328-73 feet.

INDIANA

The Carter Oil Co. is drilling at 1,762 feet in its test in Vigo County, Indiana No. 1 Paddeck, 2,310 feet from N and 660 from E lines of NE quarter section 16-10n-10w.

In Daviess County Midwest Development Co. No. 1 Norris Heirs in section 9-2n-5w was dry and abandoned in the Brown sand.

In Gibson County the Midwest Development Co. drilled a failure in No. 3 Conrad in section 10-3s-9w.

In Perry County Charles E. Dice No. 6 Krutz, section 6-5s-3w was dry and abandoned at 550 feet.

In Pike County, A. E. Davis No. ' Wood, section 23-1n-7w was dry and abandoned at 700 feet. Mascot Oil Co. completed an oil well, initial production not given, in No. 6 Ingler, section 22-1s-9w.

In Spencer County A. J. Tyler No. 1 Frazier, section 6 Huff township, was a dry hole at 641 feet. Staves Drilling Co. completed a small oil well in No. 1 Bretz heirs, section 35-6s-6w.

In Sullivan County, Niagara Oil Corp. deepened No. 1 Clarence Blount in section 1-8n-10w and has a small well.

North Louisiana, Arkansas

RODESSA, ARKANSAS, GIVEN THREAT OF RAPID DRILLING

By
MITCHELL TUCKER

SHREVEPORT, La., July 12. — Important developments for the past week in the Ark-La-Tex area were shared by the rapid development of the two flush fields recently discovered in Arkansas, the opening of a Woodbine sand field in DeSoto Parish, Louisiana, and in the plugging back and testing of the 11,486-foot exploratory test on the southern peak of the Rodessa structure. The possibility of Travis Peak production at 7,012 feet on the eastern end of Rodessa looked bright as the week closed, following coring of saturated sand in Blackwell Oil & Gas Co. No. 3 Neugent, section 8-23-15.

RODESSA—ARKANSAS

Eight wells are rigging up and four drilling in the Arkansas extension area of the Rodessa field, following completion of W. L. McClanahan's 2-mile extension, No. 1 Capps, section 11-20-28, which flowed at the rate of 120 bbls. hourly on initial test through 1½-inch tubing after acidizing. Well has now been pinched in to 500 bbls. daily through one-half inch tubing choke. Production is from the Mitchell sand, occurring at the base of the Gloyd section of Lower Glen Rose.

The Arkansas Board of Conservation held a public hearing on this field in Texarkana, Ark., last week, at which time the board accepted testimony and recommendations for spacing, casing program and proration. No order has been issued following this hearing, but the following day three permits were granted for wells on tracts of less than 10 acres, which is the present statewide spacing rule unless exceptions are granted.

RODESSA—LOUISIANA

The center of interest in the Louisiana portion of the Rodessa field rests in the present testing of R. W. Norton No. 1 Payne, SE SE section 27-23-16, situated about 1 mile south of the townsite in the gas belt, where it was drilled through the Lower Trinity, Permian and topped the salt at 11,478 feet. The well has now been plugged back from the total depth of 11,486 feet to about 10,600 feet where tubing has been run and tests are being made of attractive zones logged higher in the hole. This is the deepest hole ever drilled in the tri-state area.

The Blackwell Oil & Gas Co. No. 3 Neugent, in section 8-23-15, on the eastern edge of the field, which was originally completed as a gas and distillate producer in the Lower Glen Rose, is being deepened for an exploration of Travis Peak possibilities. At a total depth of 7,012 feet in that formation it is reported as the week closes that a total of 18 feet of saturated oil sand has been cored, and preparations are being made to run 5-inch casing for a thorough testing.

Three completions were recorded on the Louisiana side of the field. R. W. Norton No. 6 Starke, NE section 17-23-16, flowed at the rate of 76 bbls. in four hours on initial test, total depth 5,932 feet. Surf Oil Co. No. 1 Sheets, NE quarter section 8-23-16, flowed 192 bbls. in 24 hours, total depth 6,036 feet. United Gas Public Service Co. No. 11 Pitts Unit, SE NE section 13-23-16, flowed 6 bbls. hourly through 11/64-inch tubing choke, total depth 6,038 feet.

RODESSA—TEXAS

Cass County, Texas

Three oil wells and one dry hole were recorded in the weekly developments in the Cass County portion of the Rodessa, Texas, field. American Liberty Oil Co. No. 2 E. T. Tyson, School Land Survey, flowed 298 bbls. daily, total depth 6,040 feet. R. W. Norton No. 5 J. T. Moore in the J. S. Smith Survey, flowed a daily initial of 317 bbls., total depth 6,004 feet. United Production Co. No. 2 Allday flowed 15 bbls. hourly, total depth 5,920 feet. United Production Co. No. 6 Baugus Unit, R. Trammel Survey, has been plugged and abandoned at 5,920 feet after missing all saturated sections of the Lower Glen Rose.

Marion County, Texas

Attention has again been turned to the 12-mile extension area of the Rodessa, Texas, field into Marion County, as two completions were made last week and other important wells near the testing point.

Arkansas-Louisiana Gas Co. No. 1 C. C. Braden, in the T. Hanson Survey, about 3 miles east of Jefferson, has been completed as a 5,000,000-foot gasser, 2,075 pounds rock pressure, total depth 5,972 feet, after plugging back from a total depth of 6,872 feet.

In the Lodi area of this extension the Hunter Co. of Shreveport completed its second oil producer, No. 2 Fonda, A.D.S. Coy Survey, flowing 30 bbls. hourly through seven-sixteenths inch tubing choke, total depth 6,095 feet. The Arkansas-Louisiana Gas Co. No. 1 Allen Houston, two locations east of the Fonda well, has cored a total of 36 feet of saturated sand and prepares to test.

Bossier Parish—Sligo Field

In the northern portion of the Sligo gas field Arkansas-Louisiana Gas Co. No. B-2 Werner, NE quarter section 7-17-11, was completed as a 26,568,000-foot gasser, 2,175 pounds rock pressure, total depth 5,056 feet.

On the southern flank of the same field, where the Pettit lime carries oil at some locations, Triangle Drilling Co. No. 1 C. Howell, NW quarter section 26-17-12, found the Pettit zone dry and has plugged back from 5,200 feet to 4,413 feet and an attempt will be made to complete the well as a gasser in the Glen Rose.

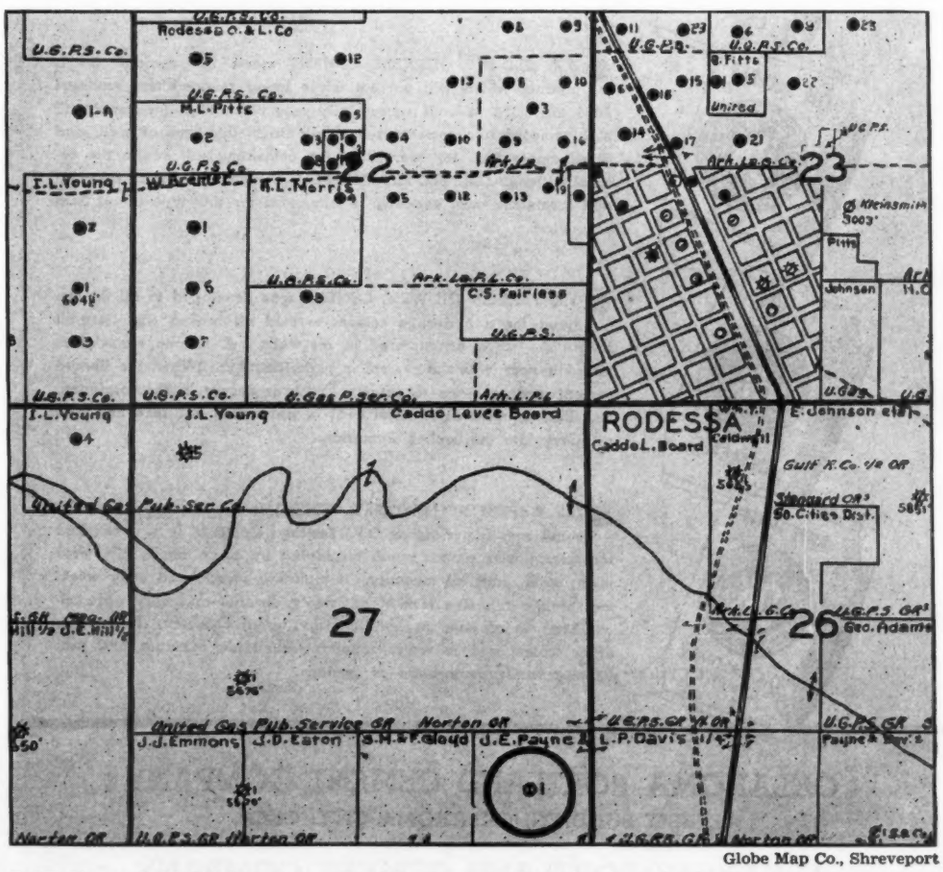
United Gas Public Service Co. was unsuccessful in its attempt to extend the Pettit lime oil production on the southern flank of the Sligo structure another mile southward, as No. 1 S. L. Herold in the NE quarter section 31-17-11 found this zone to carry salt water only. The hole has been plugged at a total depth of 5,260 feet.

Caddo Parish

In the Caddo-Pine Island area, Calatex Oil & Gas Co. No. 3-A Agurs, SW quarter section 6-16-6, pumped 7 bbls. daily, total depth 2,483 feet. Chew & Chew No. 2 Standard Oil of Louisiana, SW quarter section 33-21-16, pumped 40 bbls. daily, total depth 950 feet. Hancock & Uhlman No. 2 Helpman, section 16-21-16, found the Nacatoch sand dry at a depth of 1,063 feet, and has been plugged.

Claiborne Parish—Lisbon Field

Two important lease trades were recorded last week on Lisbon acreage. United Gas Public Service Co. has assigned Harry Hanbury eight 40-acre tracts out of their extensive block north of the present producing area, where he will begin a drilling program soon. The Pennsylvania firm of Sloan & Zook has acquired by



Globe Map Co., Shreveport

R. W. Norton's 11,486-foot test well on the structural peak along the Rodessa gas belt, which topped the Permian salt at 11,478 feet and has been plugged back to 10,600 feet for the testing of several attractive zones logged above that depth

purchase about 320 acres in section 1-20-5, where they plan to drill 18 wells within the near future.

The three completions at Lisbon last week, two in Claiborne Parish and one in Lincoln Parish, brings total producers to 50. A peak daily production of 14,210 bbls. was established last week.

Magnolia Petroleum Co. No. 2 English, S half SW NE section 31-21-4, flowed 263 bbls. in 24 hours, total depth 5,281 feet. P. W. Woodruff No. 2-B McDonald, N half NE NE section 36-21-5, flowed 21 bbls. hourly on initial test, total depth 5,277 feet. Both completions were acidized with 5,000 gallons.

Lincoln Parish

H. D. Easton and Belmont Quadrangle Drilling Co.'s wildcat test of the North Simmsboro section reached a depth of 6,011 feet in the upper Travis Peak and made Schlumberger survey to total depth. Three porous and possibly saturated zones were indicated, one from 4,584-92; from 4,732-44, and from 4,982-5,008 feet. Arrangements are being made to test these horizons.

As a Lisbon field completion in the Lincoln Parish portion of that field, Lyons & Neely No. 1 Effie P. Taylor, section 6-20-4, flowed 24 bbls. hourly on initial test, total depth 5,368 feet.

De Soto Parish

Pullman Oil Co.'s Woodbine sand discovery in De-Soto Parish, 7 miles northeast of Pleasant Hill, gauged 184 bbls. in 12 hours through three-eighths inch tubing choke after tankage was completed. About 7 per cent salt water is showing. Offsetting wells in all directions are planned soon, and this area will be afforded an early testing of its potentialities. Total depth is 2,961 feet, with 30 feet of saturated Woodbine being reported.

Grant Parish

Burkett and others No. 1 Morrison, section 10-9-1e, was completed on the flank of the Urania field, pumping 7 bbls. of oil and salt water, total depth 1,539 feet.

Monroe Gas Field

Four completions were made in the Monroe gas field of Morehouse-Union parishes, having an aggregate gauge of 42,000,000 feet from the Monroe chalk, with average rock pressure of 900 pounds.

Sabine Parish

On the flank of the Converse field, Peria Oil Co. No. 1 Brown, section 16-9-13, pumped 5 bbls. daily, total depth 1,557 feet.

Tensas Parish

Arkansas Fuel Oil Co. No. 1 Hardwood, section 8-11-10e, topped the Wilcox formation at 3,042 feet and has been abandoned at 3,080 feet after finding the horizon dry.

Estimated Daily Production

Estimated daily gross production all companies week ending July 9, 1937:

NORTH LOUISIANA

Bellevue	770
Caddo light	3,915
Caddo heavy	2,505
Converse	810
Cotton Valley heavy	255
Cotton Valley light	*4,090
De Soto and Red River	1,610
Elm Grove	365
Haynesville	3,100
Holly	135
Homer	2,515
Lisbon	12,590
Pleasant Hill	125
Rodessa	48,250
Sarepta-Carterville	375
Sligo	345
Sugar Creek	570
Urania	2,865
Zwolle	775
Total	85,965

SOUTH ARKANSAS

Champagnolle	1,450
El Dorado	2,020
Lisbon	280
Miller County	505
Nevada	765
Schuler	1,500
Smackover light	2,160
Smackover heavy	17,000
Stephens	570
Troy	635
Urbana	1,200
Total	28,085

Texas side of Rodessa field, 37,535 bbls. daily.
*3,625 bbls. is distillate.

Webster Parish

The 12 drilling wells to the 8,500-foot gas-distillate horizon in the Cotton Valley field were interrupted last week as a huge crater developed from one of the high-pressure producers. After several days fighting the crater has been brought under control.

ARKANSAS

Cleveland County

Tex-Canadian Development Co. No. 1 J. E. Moore, wildcat test in section 22-9s-10w, has been plugged and abandoned as dry, total depth 3,819 feet.

Miller County

E. H. Moore, Inc., ran Schlumberger test in his No. 2 Dale, deep test of the Garland City structure, section 24-15-26, at a total depth 7,310 feet. The well has now been shut down for orders.

Union County—Schuler Field

With three wells rigging up and 15 drilling, five of which will reach the testing point next week, attention of Arkansas operators turn temporarily from their extension of the Rodessa field in Miller County back to the Schuler field about 15 miles southeast of El Dorado.

Although no proration has been invoked by the Arkansas Board of Conservation, operators are producing the four present oil producers in a conservative manner, last week averaging 1,500 bbls. daily from the field.

Lion Oil Refining Co. made other gauges of its last Schuler completion, No. 1-B Morgan, in section 18-18-7, which flowed 33 bbls. hourly through a quarter-inch tubing choke, casing pressure 1,400 pounds, tubing pressure 1,275 pounds, gas volume about 6,000,000 feet, total depth 5,738 feet.

EAST TEXAS (Border Counties)

Marion County

Morefield & Thompson No. 5-B Potter, drilled as an extension to the Caddo field of Louisiana and Texas, has been abandoned as dry, total depth 953 feet.

Bowie County

Sutton & Hawkins' deep Trinity test, 2 miles south-

(Continued on Page 122)

For ALL USES IN THE OIL FIELDS

● O.K. STANDARD PORTLAND CEMENT is used wherever there is need for an all-purpose cement of highest quality. It exceeds by a wide margin all the requirements of the Standard Specifications of the United States Government and of the American Society for Testing Materials.

● O.K. LIGHTNING OIL-WELL CEMENT, developed to fill the need for a high early strength cement absolutely unaffected by salt water, has been proved by laboratory tests and by years of successful use in the field, to be the best possible insurance for a successful cementing job.

● O.K. SLO-SET OIL-WELL CEMENT meets the demand for a product which will not set while being pumped into wells of 5000 to 10,000 feet. It successfully resists the high pressures and high temperatures sometimes encountered in this type of well, and gives ample time for completing the cementing job before the cement stiffens. O.K. SLO-SET OIL-WELL Cement is sulphate-resistant and meets the most exacting requirements for this type of oil field cementing.

● O.K. FIBERED OIL-WELL CEMENT was developed to fill the demand for a hydraulic cement to seal off broken and fissured formations when encountered in oil wells. A fibrous material is mixed uniformly in the cement in manufacturing. When the fibered cement mixture starts to enter a crack or fissure in the formation, the fibers spread across and seal it, preventing entrance and loss of slurry into the broken formation.

● O.K. SUPERFINE MASONRY CEMENT is manufactured from the same raw materials as O.K. Portland Cement. It is unexcelled for mortar with proper sand, for laying up brick, block, tile, terra cotta, stone, and all masonry. It makes a plastic and easy working, highly adhesive mortar, extremely durable and very economical because of ease in handling and great cohesion. It combats efflorescence and is water repellant, shedding moisture and preventing water penetration of mortar.

OKLAHOMA PORTLAND CEMENT COMPANY
PERRINE BUILDING, OKLAHOMA CITY, OKLA.

ARKANSAS PORTLAND CEMENT COMPANY
WALLACE BLDG., LITTLE ROCK, ARK.

California Field Report

By
L. P. STOCKMAN

109 OPERATIONS STARTED IN WILMINGTON DRILLING ORGY

LOS ANGELES, Calif., July 12.—Two wildcats located in Kern County showed production possibilities on tests in the past week. In the Magunden district of Kern County, a joint test of Superior Oil Co. and A. T. Jergins Trust No. 2 Crome Community in section 36-29-28, was brought in pumping 205 bbls. of 17.1 gravity oil per day from 2,794 feet, but the well went to water within 48 hours following completion. Water was located at 2,775-90 feet, below the shoe of the 8⅝-inch water string landed at 2,753 feet. The crew is coring ahead in oil sand at 3,130 feet. This is the second well drilled on the Crome Community lease, and is the result of the coring of oil sand in the initial wildcat. No. 1 failed to result in commercial production because of water, but No. 2 has shown a greater thickness of oil sand and looks better despite the logging of a water sand.

Amerada Petroleum Corp. No. 4 Beer, a wildcat in the Devils Den-Blackwell's Corners area of Kern County, in section 17-26-19, was completed pumping 25 bbls. of clean 25.1-gravity oil daily from 2,670 feet, but production subsequently declined to 10 bbls. per day with the gravity and cut unchanged. This wildcat, finished with 43 feet of 4¾-inch liner including 15 feet of perforated, only has 14 feet of oil sand from which to draw. This is the fourth test drilled by the company in this area, the first three having been abandoned. It is the intention to keep this well on the beam for several days in order to determine whether the well is capable of sustained production before undertaking any additional drilling. Ohio Oil Co. abandoned its No. 2-E Kern County Land, in section 6-30-26 between the Ten Section and Greeley fields, at 8,768 feet. The Stevens sand was definitely logged, but found barren. In the Tejon Ranch area of Kern County, where three wildcats have shown evidence of the existence of a possible oil field, Reserve Oil & Gas Co. is rotating ahead in a sandy shale at 5,115 feet in well No. 33-4, located in section 33-11-19. The present well is coring lower structurally than the first three wildcats.

Wilmington

The Wilmington field of Los Angeles Basin is producing 40,600 bbls. of crude oil per day from 141 wells and has a potential daily production slightly in excess of 86,000 bbls. There are 48 wells actively drilling and 61 rigging up or with derrick standing, making a total of 250 operations either completed or starting in the field to date. The number of wells drilling will be substantially increased in the near future by additional development of General Petroleum and Union Pacific Railroad within the city of Los Angeles and by additional development expected to be undertaken on an aggressive scale as soon as drilling operations are permitted within the corporate limits of the city of Long Beach. General Petroleum Corp. has plans made for the drilling of 24 new wells and Union Pacific Railroad contemplates the drilling of 60 additional wells this year.

Black Gold Oil Co. extended the western limits of the Wilmington field by completing No. 3 Studley-Hayman at "F" and Broad Street, flowing 457 bbls. of 20.4 gravity oil daily. This well was bottomed at 3,669 feet and finished with a 6⅝-inch oil string. The relatively large production registered was rather surprising due to its position on the structure, and the company is rushing plans to begin early work on No. 4, one location north of No. 3 Studley-Hayman. General Petroleum Corp. finished an excellent well when No. 9 Ford was brought in flowing 2,520 bbls. of relatively clean 27.4-gravity oil initially through a five-eighths inch bean from 4,122 feet. This new producer, which has 1,082 feet of oil sand, was cemented through perforations at 3,040 feet and completed with a 6⅝-inch liner. In addition to 220 feet of liner, the 8⅝-inch was hung at 3,800 feet and perforated between 3,041 feet and 3,760 feet. General Petroleum has recompleted No. 3 Ford flowing 483 bbls. of 29.9-gravity oil daily after plugging back the hole from 5,651 feet to 5,390 feet. The lower part of the hole, that between 5,390 feet and 5,651 feet, tested wet and the well is at present time producing between 4,915 feet and 5,390 feet.

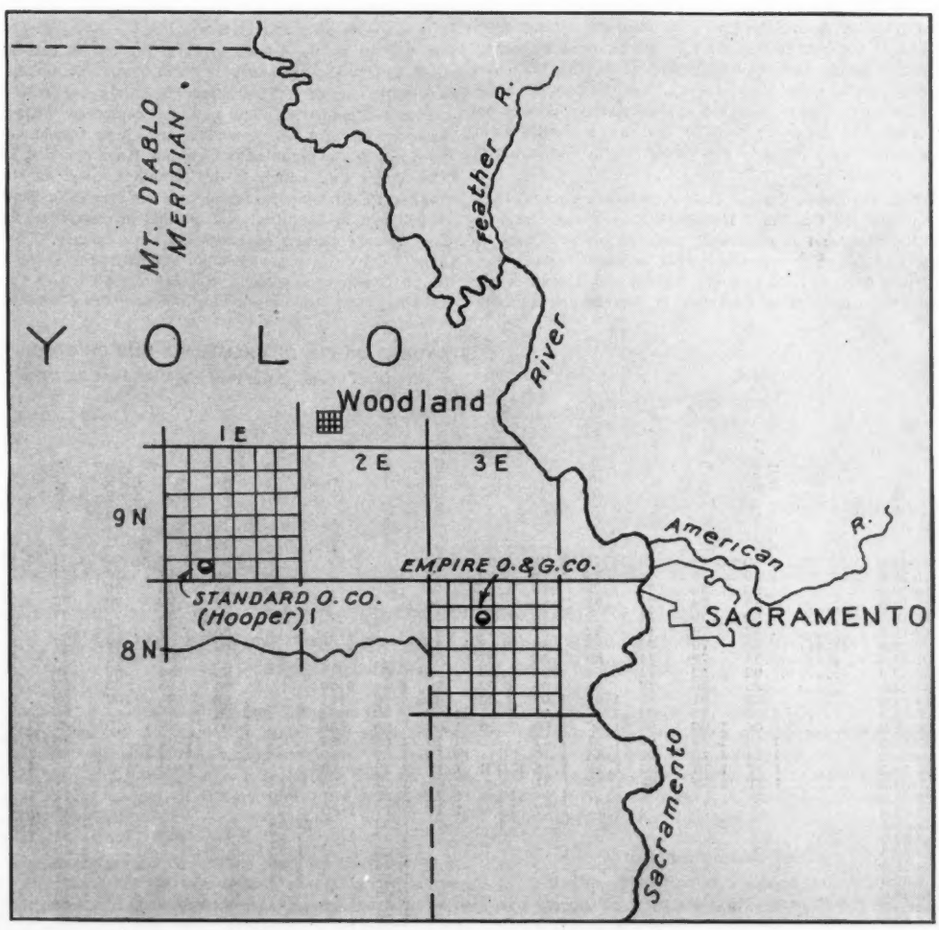
Additional Completions

Union Pacific Railroad, largest holder of undeveloped acreage in the Wilmington field, completed Nos. 16 and 23. The latter was brought in flowing 2,020 bbls. of clean 18.9-gravity oil per day from 3,450 feet, flowing through a 15/64-inch bean under a pressure of 150 pounds on the tubing and 640 pounds on the casing. The hole was finished with a string of 8⅝-inch, cemented through perforations at 3,000 feet, and included 438 feet of 60-mesh. No. 16, bottomed at 3,726 feet but plugged back to 3,670 feet and finished with 367 feet of 60-mesh, was brought in flowing 561 bbls. of 21.9 gravity oil daily. It was completed through a 28/64-inch bean and preparations are being made to kill the flow and replug the bottom of the hole in order to effectively shut off bottom water.

Bankline Oil Co. completed three new wells in the Wilmington field, No. 19 P.T.C. flowed 620 bbls. of 20.7-gravity oil daily from 3,361 feet, substantially above the average for wells in this section of the field. No. 7 P.T.C. pumped 282 bbls. of 17.7-gravity oil daily from 3,355 feet. It was finished with an 8⅝-inch water string landed at 3,113 feet and 267 feet of 6⅝-inch liner including 261 feet of perforated. Bankline Oil Co. No. 2 Classification Yards was good for 285 bbls. of 18.5-gravity oil daily on the beam from 3,493 feet. No. 1 Thiele Community of Pacific Western Oil Co. was completed flowing 304 bbls. of clean 14.6-gravity oil daily from 2,849 feet. It was finished with an 11¾-inch water string landed at 2,550 feet and 329 feet of 8⅝-inch liner including 293 feet of 60-mesh, and is flowing through a 31/64-inch bean. Royalty Service Corp. No. 1-A Santa Fe was completed flowing 402 bbls. of relatively clean 16.6-gravity oil initially from 3,620 feet through a half-inch bean. Perforations were at 2,851-2,913 feet, 2,986-3,017 feet, 3,084-3,145 feet and at 3,218-3,620 feet. General Petroleum Corp. has staked locations for five wells, No. 1 Blinn, No. 1 S.P. and Nos. 30, 32 and 35 on the Ford property.

Santa Maria

Three wells were completed in the Santa Maria Valley field. Union Oil Co., discoverer of the Santa Maria Valley field, completed No. 3 Mahoney after



Standard Oil Co. and Empire Oil & Gas Co. are making preparations to drill wildcats in Yolo County, north of San Francisco

plugging back from 3,800 feet to 3,638 feet, and this producer, in section 24-10-34, was brought in pumping 235 bbls. of 15.6-gravity oil daily. Union Oil Co. spudded in No. 1-19 Enos and work will be watched with interest as it is the most northeasterly outpost in the field. It is northwest of No. 1 Rice, which the Union abandoned as a duster. No. 1 Bradley Lands was spudded in June 23 and in 15 days the bit had reached a depth of 4,088 feet. It is an easterly offset of Hancock-Bush Oil Co. No. 1 Bradley Lands and A. N. Macrate No. 1 Fernandez, both good wells.

On the Russell lease, the Union has started rig construction for No. 2, 660 feet south of No. 1 O'Donnell. On the Vincent lease, the company has decided to deepen No. 2 and this should greatly stimulate production. No. 1 Vincent, finished some time ago, was completed flowing 3,700 bbls. daily from 4,211 feet and No. 3 Vincent was completed flowing 2,707 bbls. per day from 4,227 feet. When No. 2 Vincent was drilled the crew logged a gray sand which looked as though it might carry water and thus the company concluded drilling at 3,516 feet. Subsequent drilling in No. 3 Vincent proved this gray sand to be free of water and as a result instructions have been issued to deepen No. 2 Vincent approximately 700 feet. The Hancock Oil Co. and R. R. Bush Oil Co., which are jointly developing acreage in the field, have completed No. 2 Brown, flowing 300 bbls. of exceptionally clean 16.4-gravity oil daily from 3,824 feet. This well was finished with 579 feet of 6⅝-inch liner including 558 feet of perforated. Pacific Western Oil Co. completed No. 1 Hobbs, flowing 415 bbls. of clean 16.3-gravity oil per day from 4,226 feet, but production is expected to increase after the well has been on production for a few days longer. No. 1 Hobbs logged 400 feet of Monterey between 3,800 feet and 4,200 feet.

San Miguelito

Continental Oil Co. completed an excellent well in the extreme eastern end of the San Miguelito field of Ventura County when No. 7 Grubb, in section 24-3-24, was brought in flowing 1,100 bbls. of 34.9-gravity oil and 11,800,000 feet of natural gas per day from 6,860 feet. It was finished with 1,401 feet of 6⅝-inch liner carrying perforations at 5,485-6,171 feet and at 6,335-6,860 feet and was cemented through perforations at 6,335 feet. Above the liner, the company landed 5,490 feet of 8⅝-inch casing. This is one of three large producers in the extreme eastern end of the San Miguelito field which Continental Oil Co. has completed in the past year. These wells are approximately midway between the discovery well in the San Miguelito field and the most westerly production in the Ventura Avenue field.

In the Padre Canyon field of Ventura County, Continental Oil Co. No. 3 Hobson has been suspended at 7,291 feet and is apparently located off structure as it has failed to correlate with adjacent wells. The Padre Canyon field is badly faulted and operators are having considerable difficulty in determining suitable locations. The field has yielded one large well, Continental Oil Co.'s discovery well, north of the San Miguelito fault. Subsequent completions have been rather unsatisfactory. In the Rincon field of Ventura County, which is at the extreme western end of the Ventura Avenue anticline, Chanslor Canfield Midway Oil Co. has No. 14-B Hobson in the oil sand at 3,750 feet and is rotating ahead in No. 15-B Hobson in a hard brown shale at 3,200 feet. This development after a dormant period of several years reflects the completion a few months ago of a large well on the Hobson property by Chanslor Canfield Midway Oil Co. On the U. S. Hobson lease, Richfield Oil Corp. is rotating ahead in No. 2 at 2,670 feet. In the Capitan field of Santa Barbara County, Shell Oil Co. has completed No. 1-24 Covarrubias, flowing 910 bbls. of unusually clean 21.3-gravity oil and 214,000 feet of gas per day through a five-eighths inch bean under a pressure of 325 pounds on the tubing and 345 pounds on the casing. This well, bottomed at 1,328 feet, was finished with 210 feet of 6⅝-inch liner including 161 feet of perforated landed at 1,328 feet and cemented through perforations at 1,167 feet. The crew was transferred to No. 1-26 Covarrubias, which has been spudded in. The Texas Co., which is drilling an outpost in the Capitan field on the Careaga lease, has reached a depth of 950 feet in its initial test on this property. In the Los Alamos district of Santa Barbara County, E. C. Arnold Oil Corp. has picked up the Monterey shale in No. 2 Careaga, a wildcat in section 8-8-32, and this well may bear watching during the next few weeks.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 1		June 24			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	193,047	27,578	102,075	14,582	1,906,912	3,274,578
Kerosene	.....	.....	52,411	7,487	250,642	729,961
Foreign exports:						
Crude oil	291,426	41,632	379,683	54,240	6,968,484	4,775,723
Fuel oil	292,675	41,811	479,971	68,567	7,428,138	5,244,269
Diesel and gas oil	323,659	46,237	301,904	43,129	3,832,120	2,864,194
Gasoline	122,846	17,549	227,933	32,562	3,820,035	3,474,881
Kerosene	.....	.....	5,919	846	1,100,606	679,184
Other unfinished oil	.....	.....	159,188	22,741	576,948	16,894
Coastwise-domestic:						
Crude oil	188,937	26,991	133,386	19,055	1,564,420	3,589,194
Fuel oil	128,670	18,381	316,290	45,184	7,351,696	4,500,770
Diesel and gas oil	17,291	2,470	14,440	2,063	1,102,778	686,235
Gasoline	615,176	87,882	245,454	35,065	7,239,235	6,479,239
Kerosene	48,674	6,953	2,170	310	147,622	128,225

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	227,419
Asphalt	63,918	9,131	.....	.....	205,319	68,586
Lubricants	.....	.....	.....	.....	12,857	27,673
Foreign exports:						
Crude oil	61,345	8,764	85,420	12,203	1,538,082	1,498,070
Fuel oil	.....	.....	91,298	13,043	1,075,516	1,475,103
Diesel and gas oil	43,065	6,152	138,817	19,831	1,551,976	611,092
Gasoline	217,818	31,117	.....	.....	2,729,656	1,694,909
Kerosene	116,185	16,598	.....	.....	471,545	389,174
Lubricants	.....	.....	.....	.....	307,142	150,074
Coastwise-domestic:						
Fuel oil	147,931	21,133	98,116	14,017	3,262,267	3,688,198
Diesel and gas oil	.....	.....	26,231	3,747	460,693	388,473
Gasoline	92,564	13,223	107,016	15,288	2,279,771	2,666,485
Kerosene	.....	.....	9,869	1,410	84,935	88,330

Mount Poso

Ring Oil Co., which a few months ago discovered a producing area about a mile west of the Dominion field and 2 miles northwest of the northern tip of the Mount Poso field, has completed a second producing well in the district, No. 1 Shapiro pumping 261 bbls. of relatively clean 16.6-gravity oil daily from 1,738 feet. It picked up the top of the Vedder at 1,700 feet, and the hole was finished with 87 feet of 7-inch liner including 42 feet of perforated. This well extends production limits southeastward about 1,000 feet, and indicates the possibility that the apex of the structure may be southeast of the discovery well, as No. 1 Shapiro is 40 feet higher structurally than the discovery well. No. 1 Shapiro is in section 32-26-28, whereas the discovery well, No. 29-2 Bowles, is in section 29-26-28. Ring Oil Co. has started rig construction for No. 3 Vedder-Bowles.

In the Round Mountain field, Kern County, Honolulu Oil Corp. completed No. 13 in section 18-28-29, pumping 367 bbls. of exceptionally clean 14.1-gravity oil initially from 1,955 feet. This well has 8⅝-inch water string landed at 1,932 feet and finished with 49 feet of 7-inch liner including 25 feet of perforated. In section 20-28-29, the company has spudded in No. 35 and in section 18-28-29, is building rig for No. 12. In the North Belridge field, Kern County, Belridge Oil Co. should be ready to complete No. 3-26 in section 26-27-20 shortly as this well is in the pay at 8,319 feet.

(Continued on Page 109)

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

West and North Texas

By
L. E. BREDBERG

ADDITIONAL WELLS START IN AVOCA POOL, JONES COUNTY

FORT WORTH, Tex., July 12.—The discovery, made by the Iron Mountain Oil Co. on the C. A. Olander lands, NE SW section 196, B.B.B.&C. Survey, in Jones County, 3 miles east of Avoca, from which town the field will take its name, and 3 miles north of the shallower Lueders field, is producing from the Canyon series in the Palo Pinto lime, the porous lime being logged at 3,238 feet, the oil testing 42.1 degrees. The split casing caused the company to kill the well in order to run 7-inch over the 5⅞-inch, and a test is now being made of the casing and well. A three-hour potential gauge was taken before the 5-inch casing split, showing the well good for 800 bbls. on that test, or above 6,000 bbls. per day from total depth of 3,250 feet, after acidizing with 3,000 gallons. Three offset locations were staked, two of which have already spudded, and another location was made about 3 miles to the southeast to test another lease in the vicinity of the well, with other locations proposed for immediate spudding.

The Humble Oil & Refining Co. was responsible for drilling this well deeper, after it passed up 11 showings above the present deepest horizon. It probably would not have made a well in any one of the higher sands or lime strata. The Iron Mountain Oil Co. staked an offset to the north and a diagonal offset to the northeast. W. L. Pickens and Maracaibo Exploration Co. of Dallas staked an east offset location and Jones and Stasney, one about three-quarters of a mile to the southeast, in the NW cor. SW section 172.

A couple of weeks ago Fain-McGaha Oil Corp. of Wichita Falls abandoned their No. 1 Mrs. E. C. Lucas, in the SE quarter of section 167, the same survey the discovery is in, and about 2 miles northeast of it, at a total depth of 2,099 feet. That test proved dry in the upper sand and lime horizons, but may be given another chance at production by being carried to the new horizon.

There is a dry hole bottomed at 2,500 feet in the SW quarter of section 193, about 3 miles to the northwest of the new strike and the Consolidated Oil Co. may clean out a shallower hole on the Cox lands on the eastern edge of Avoca, 3 miles to the west to carry it on down in search of the new pay. Tests have also been abandoned on the north and northeast, and northwest side of the Lueders field after they failed to make producers from the pay horizons already producing in that field, and no doubt someone holding leases in the Lueders field will seek the deeper pay as the Lueders wells are not big producers.

Dry Holes Do Not Discourage

While dry holes in eastern Texas have a tendency to slow down wildcatting the same is not true of the West Texas district, which is much larger in area and where the percentage of discoveries is much greater than in the eastern part of the state. For this reason, operators are drifting westward, and although a number of dry holes are reported in West Texas every week, a greater number of wildcat locations are staked. This week seven dry holes, not including those in Jones County, were abandoned, but at the same time eight wildcat locations were announced, with four others being announced for Jones County.

Hockley County

Frank A. Bates of Fort Worth, has staked location for an extreme wildcat in the south central part of Hockley County, about 11½ miles east of the Texas Co.'s discovery in the southwestern corner of the county. Location of the new test on the Lockett lands, in section 5, Block 1, P.S.L. Survey, on a block of 4,200 acres assembled by Bates, and in which the Honolulu Oil Corp., Magnolia Petroleum Co., Western States Gasoline Corp., Devonian Oil Co. and Phillips Petroleum Co., have taken spreads. The Lee Drilling Co. of Tulsa has the contract, which calls for a 5,500-foot hole.

Dickens Wildcat

C. E. Litchfield is drilling No. 1 Harris, in section 354, Block 1, H.&G.N. Survey, in the southwestern quarter of Dickens County. Some carry this county in the Panhandle district, but others refer to it in connection with West Texas, consequently it will be carried on the drilling report as in West Texas.

Two More for Fisher

Two more locations in the newly opened Rotan area in Fisher County were staked, one being in the same section as the discovery well, section 172, Block 2, H.&T.C. Survey, and the other about 3 miles to the west on the west edge of Rotan, and in section 169, same block and survey. The former is about one-half mile northwest of the discovery. These will make the third and fourth tests for this new pool, which was opened a couple of months ago by the Southern Oil Corp. of Dallas on the Joe Robinson lands. The discovery has never been tested, due to completion troubles and lack of pipe line outlet, but it is estimated good for from 3,000 to 5,000 bbls. of 41.7-gravity oil per day. It topped the pay, sandy lime, at 3,502 feet and is shut in at 3,505 feet.

The Magnolia Petroleum Co. and the Tide Water Associated Oil Co. are drilling east of the discovery. If those two tests make wells the pool will perhaps be given a pipe line outlet by the Shell Petroleum Corp., which has the nearest line to the area. Development of the pool depends on such a line and the outcome of the two tests now drilling and the two preparing to get under way.

Eastern Ector

About 4 miles north of Odessa, and in the east central part of Ector County, the Phillips Petroleum Co. has staked location on the John Gist ranch, in section 2, Block 42, Township 2s, T.&P. Survey. Rig is now being moved in. Location is about 4 miles northeast of the Foster or Odessa field.

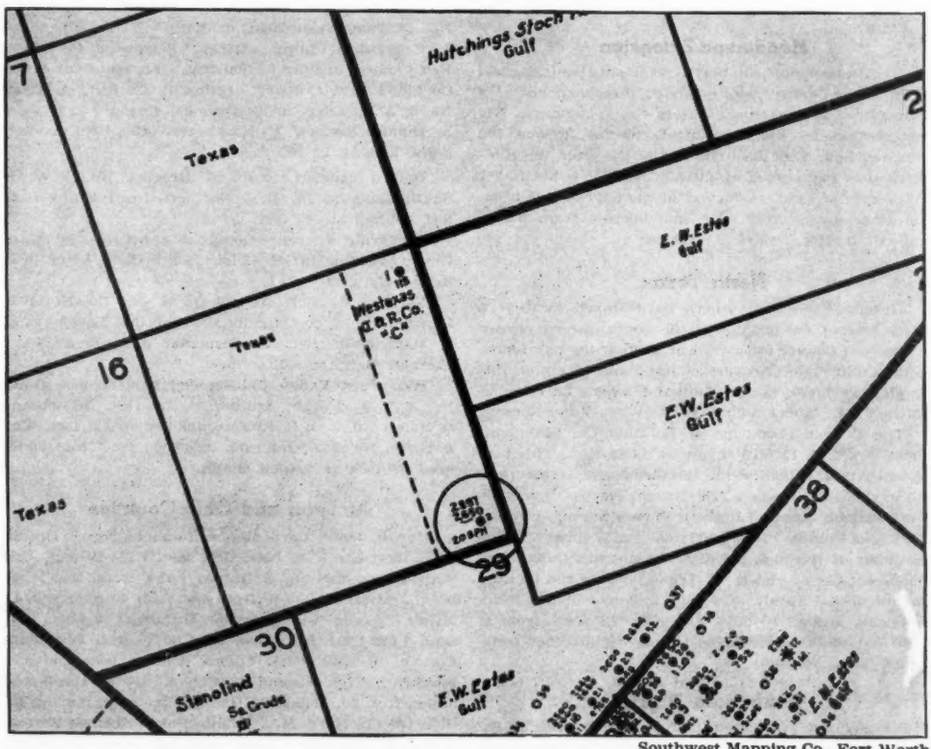
Abandonment

The Wentz Oil Corp. abandoned No. 1 Dalmont, in section 5, Block A-22, P.S.L. Survey, about 3 miles southwest of the lone well of the Landreth Oil Corp. in Gaines County. Total depth of this disappointment, one of several already drilled around the small discovery, is 4,885 feet. Elevation is 3,302 feet. The same company made a location last week for a test in section 7, about 1 mile southeast of this disappointment, and between it and another dry hole.

Another probable abandonment is that of the Empire Oil & Refining Co. on the Biles ranch in the northern part of Andrews County, in section 12, Block A-31, P.S.L. Survey. It is below 4,850 feet. Saturated streaks logged below 4,577 feet failed to pay off.

Connection of Pools

With the completion of the West Texas Oil & Royalty Co. No. 2-C University, SE cor. section 6, Block 16, about three-quarters of a mile north of the nearest production in the Estes field and about the same distance south of an old producer of the same company, and in



Southwest Mapping Co., Fort Worth

New outpost oil well, and older producer 1 mile north of it, which apparently are destined to link the comparatively new Estes field in the western part of southern Ward County and the older Hutchins field to the north

the northeast corner of the section, it now appears as if the Estes and Hutchins fields will eventually be connected, making a vast field from north to south. The 2-C University flowed 370 bbls. in 22 hours from sandy lime logged at 2,397 feet to the total depth of 2,650 feet.

Defining Test

The Goldsmith field, Ector County, one of the largest in the West Texas district, has received its first defining test with the abandonment of Continental Oil Co. No. 1-A Wight in section 18, Block 43, Township 1s, T.&P. Survey, east of production. It drilled to water at 4,455 feet, but was plugged back and shot, making better than 2,000,000 feet of gas. It is being plugged. Elevation is 3,071 feet. The field so far has not been defined in any other direction. The field has been linked with the Scharbauer and Cummins areas to the north, making a producing area about 14 miles from south to north.

Stonewall Test

Another proposed Stonewall wildcat reported is that of Henry Dyer of Graham on a 10,000-acre block lying between Aspermont and Peacock, and which was assembled by T. C. and John W. Hoy. Tentative location is about 1 mile from Swanson, section and block not having been announced.

Dawson Wildcat Locations

Rav Albaugh, who recently drilled in a small producer in the northwestern part of Dawson County, has taken over two blocks, one in the southeastern part of the county and the other in the southwestern part. The first mentioned test will be drilled in section 17, Block 34, Township 4n, T.&P. Survey, on the Dewey Hogg lands. The second test will be drilled in the Higgenbotham lands, in Labour 24, League 269, Moore County School Lands Survey. Both are contracted to go to 5,000 feet.

Henderson Extension

The Henderson field, north of the old Hendrick field in Winkler County, was extended three-quarters of a mile south when Osen & Jeffers No. 1 Hendrick, NE cor. section 16, Block 26, P.S.L. Survey, flowed 100 bbls. per hour with 3,500,000 feet of gas from the Hendrick lime pay logged at 3,032-39 feet. It is about 1½ miles west of sand production in the Sayre-Howe area, but is producing from the lime horizon from which wells in the Hendrick field produce.

North Texas

Reagan Clark and others have staked location 2 miles east of Collinsville in the southwestern corner of Grayson County for a wildcat seeking the pay found in the Collinsville discovery of Rapp and others on the Singleterry lands in the Quillen Survey. Location is on the F. M. Robinson lands in the W. C. Miller Survey.

The Denver Producing & Refining Co. has abandoned No. 1 G. E. McMenamy at 4,085 feet. This test is north of the Collinsville discovery and is the first failure drilled in the area. The Denver company spudded No. 1 Cannon Estate, Elizabeth Barnes Survey, in eastern Cooke County. This 4,000-foot test is about 3 miles southeast of the lone producer of the Big Indian Development Co. on the B. W. Davis farm in the Fannin County School Lands. The Big Indian well has been producing around 10 bbls. a day for 12 years from a 3,500-foot sand, which failed to pay off in other tests drilled in the vicinity.

Panhandle District

Another producing area in Moore County was given an increase the past week when the Phillips Petroleum Co. No. 1 Eblin-McDowell, northeastern corner of the county, and near the Hutchinson County line, flowed 300 bbls. of oil in seven hours. This well last month made a flow of 192 bbls. in 12 hours with 14,000,000 feet of gas at a total depth of 3,210 feet. It was deepened 5 feet and the increase in oil came when deepened. It is located in section 18, Block M-16, A.B.&M. Survey. It will probably be further deepened in an effort to raise its potential.

Activities are picking up in the Panhandle field along with the many other districts in Texas, each week seeing more locations staked and more completions reported than have been reported in a long time

COMPLETIONS IN WEST TEXAS

Andrews County

Fuhrman Petroleum Co. No. 6-B Bonner, 4,201-4,500

(Continued on Page 122)

No Let-Down in Activity in Fields of Kentucky

By SPECIAL CORRESPONDENTS

OWENSBORO, Ky., July 12.—Seven oil wells, two gas wells and one dry hole were completed in the past week in the western Kentucky fields.

Hancock County

Adair district: Kentucky Natural Gas Co. No. 2 J. C. Adams, rigging up.

Easton district: W. E. Hupp No. 5 Emma Falls, Jackson sand, 50 bbls. Moss Oil Co. No. 2 Mrs. Nora Richards, 225,000 feet of gas from Jackson sand, 475-500 feet, total depth 504 feet. Hume and others No. 1 W. R. Jones, moving in. Kentucky Natural Gas Co. No. 2 W. R. Edge, drilling 250 feet. Chester Oil Co. No. 7 J. W. Baughn, drilling 300 feet. J. C. Ellis No. 14 R. A. Richards, moving in; No. 7 Thelia Richards, spudding in.

Pellville district: O. D. Vickers and others No. 4 Mrs. M. O. Brown, 40 bbls., Jett sand, total depth 540 feet. Carpenter & Vickers No. 1 W. D. Richardson, drilling Jett sand at 500 feet. Frank Damron and others No. 4 Ollie Lyons, drilling 225 feet.

Ohio County

Westerfield district: Jess Ellis No. 13 Dave King, 10 bbls., Jett sand. W. C. Black and others No. 2 Basil Taylor, shut down at 500 feet. B. & B. Oil Co. No. 18 Tom Westerfield, drilling.

Friendship Church district: Petroleum Co. No. 4 Ben Canary, drilling at 300 feet. Interstate Oil & Gas Co. No. 4 A. S. Crawley, drilling at 320 feet. A. Teller No. 2 A. S. Edge, drilling at 400 feet.

Dundee district: C. Marsh and others No. 1 Clark heirs, drilling at 280 feet.

Buford district: Evans & Gregory No. 5 W. F. Smith, spudding in. R. J. Northern No. 1 Frank Bartlett, drilling at 345 feet.

Fordsville district: George Stewart No. 20 E. S. Dunn, spudding in. E. Dehart No. 4 Clark heirs, drilling at 250 feet.

Narrows district: Nollem Oil & Gas Co. No. 1 B. Lloyd, 15 bbls., combination Jackson and Barlow sand.

Maxwell district: A. Carpenter and others No. 2 Herman Barr, spudding in.

Woodward Valley Church district: Thomas Galey No. 3 J. W. Foster, drilling at 500 feet. Hildebrand & Marsh No. 3 G. C. Rowan, drilling at 230 feet. Cox & Acton No. 2 A. Johnson, 2,300,000 feet from Jones sand, 1,138-50 feet, total depth.

McLean and Ohio Counties

Hardin pool: Carpenter and others No. 5 Hardin heirs tract No. 1, 40 bbls., Jett sand 1,134-49 feet, shot with 40 quarts; No. 3 Hardin heirs tract No. 2, 40 bbls., Jett sand 1,136-49 feet, shot with 40 quarts. J. C. Miller, Trustee No. 10 Austin & Cullen, 50 bbls., Jett sand 1,089-1,111 feet, shot with 80 quarts. Petroleum Co. No. 10 Mrs. Bettie Cullen, drilling Jett sand and moving in Nos. 11 and 12 Cullen. W. E. Hupp and others Nos. 20, 21 and 22 Hackett Brothers, moving in. Ohio Oil Co. No. 1 Mrs. Fannie Foley, drilling Barlow sand, Jett sand dry, Jones sand full of water. W. E. Hupp and others No. 3 John A. Givens, drilling at 1,230 feet; No. 2 L. W. Tichenor, drilling at 880 feet. W. W. Damron No. 1 G. C. Rowan, rigging up; No. 1 B. M. Coleman, drilling at 200 feet.

Daviess County

Browns Valley district: W. E. Hupp No. 1 Nora Richards, drilling at 840 feet.

Red Hill district: H. C. Davis and others No. 6 Herbert Salmon, underreaming at 650 feet. F. Zogg and others No. 6 Homer Cossler, drilling at 200 feet.

Haynes district: Rex-Pyramid Oil Co. No. 1 Lonnie Cooper, drilling at 250 feet.

McLean County

Island district: South Penn Oil Co. No. 1 H. K. and John Kirtley, drilling at 580 feet. Hume & Steele No. 2 Lawrence Conrad, moving in.

Maxwell district: Ellis & Huff No. 2 John Ditto, drilling at 984 feet.

Muhlenberg County

Rochester district: A. Corbitt No. 1 Tell Robinson, dry hole, total depth 1,002 feet.

Hopkins County

Slaughters district: Imperial Oil & Gas Co. No. 1 Archibald Estate, underreaming at 2,250 feet.

Breckenridge County

Vanzant district: Carpenter and others No. 2 Cal Bland, Jett sand dry, 60,000 feet of gas from Jackson sand 450-68 feet, drilling in Barlow sand.

EASTERN KENTUCKY

ASHLAND, Ky., July 12.—Two gas completions represented results in the past week in eastern Kentucky.

The Kentucky West Virginia Gas Co. reports No. 549 on the T. J. Hagans land on Jones Fork in Knott County completed at a total depth of 2,344 feet with a daily flow of 563,000 feet of gas, and No. 550 on the Charles and Francis Sturgill farm near by starting at 1,361,000 feet of gas per day at a total depth of 2,604 feet.

Reports from reliable sources in Floyd County indicate that several test wells will be drilled deep into Berea, Weir and other deep sands to 4,000 feet or more in an effort to find profitable crude oil production in the county. Many shallow wells after yielding high quantities of oil, no longer produce, but if the test wells prove productive, depleted wells will be opened and drilling on a large scale will start.

William Sexton of Garrett, Ky., is quoted in local newspaper as saying that 35 years' experience in Floyd oil fields has led him to believe that great stores of oil lie in the deeper sands of Floyd County. He is field superintendent for the South Penn Oil Co. of Irvine, Ky. His firm is not engaged in drilling any of the deep test wells.

In Magoffin County Evans Oil & Gas Co. is drilling at the 750-foot mark in No. 1 Josephus Howard on Mason Creek, Burning Fork district. C. J. Sipple & Co. are making grade for No. 7 on William Salyer farm in the same district. Will move rig in and start drilling soon as possible.

The Bed Rock Petroleum Co. has cased No. 29 at 798 feet on E. R. Caudill farm, on Caudill Fork of Burton, in the Burton-Oil Springs district. A. V. Hoenig is down 700 feet in No. 34 on Green Rice land on Litteral Fork in the Wheelersburg district.

In the South Fork district of Powell County the B & B Oil Co. has reached the 625-foot level in No. 6 Frank Ragess, Mountain Springs. Mrs. Agatha Wireman was drilling at 250 feet in No. 18 J. M. Townsend, on South Fork. George B. Nelson has moved rig on the E. W. Baker lease and is preparing to drill. This lease adjoins the Agatha Wireman lease on Kinser heirs land on South Fork.

The Inland Gas Corp., after shooting and testing No. 1 E. A. Hammonds land, Right Fork of Troublesome Creek in Knott County, has decided to resume drilling. The same firm is at the 1,878-foot level in No. 2 R. C. Kilgore land, nearby. Inland has reached the 30-foot stage in No. 1, Ritter Short land on Wiley Fork of Troublesome Creek.

In Floyd County, Kentucky-West Virginia Gas Co. is down 1,551 feet in No. 551 Jennie Caldwell land on Levisa Fork. The same company is at the 1,825-foot mark in No. 552, on Elizabeth Sellards land, also on Levisa Fork, and has reached the 900-foot level, in sand, in No. 5,224 Burris Herald farm on Cow Creek.

In Martin County, Kentucky-West Virginia Gas Co. is down 1,120 feet in No. 5,223 C. W. Preece land on Coldwater Fork, and has made locations for Nos. 6, 7 and 8 on this same farm and will start operations in the near future.

Rocky Mountain Area

By T. R. INGRAM

OUTPOST WEST OF CUT BANK AND GOOD WELL IN GARLAND

DENVER, Colo., July 12.—The Ohio Oil Co. has a 374-bbl. well in the Madison lime in its No. 1 Smith, Garland dome, Wyoming. Carter Oil Co. Billy Creek dome test is at critical stage in Sundance sand and may go to the Pennsylvanian. Water well being drilled for deep test in Cherokee Ridge, in Sweetwater County, had 300,000 feet of gas at 200 feet and more at 300 feet.

Montana is to have an important wildcat test west of the Cut Bank field on the Chalk Butte dome. The Cut Bank field had one completion and one new operation. The Kevin-Sunburst field had four completions and six new operations.

NEW MEXICO

Shell Petroleum Corp. No. 3-E State, C SE NW section 13-20-36, Lea County, was completed at 3,880 feet, total depth, with initial production of 235 bbls. of oil in four hours.

Gulf Oil Corp. No. 2-B Bell Ramsey, C SW SW section 33-20-37, was a completion at 3,840 feet, total depth. It flowed 225 bbls. of oil in six hours. Same operator's No. 6 White, SE section 25-20-36, flowed 120 bbls. of oil in six hours and was completed at 3,850 feet.

Phillips Petroleum Co. No. 3 Hobbs, SW section 18-20-37, flowed at the rate of 30 bbls. of oil an hour after acid treatment and was completed at 3,870 feet, total depth.

Stanolind Oil & Gas Co. No. 3 Gilluly, NE section 25-20-36, was bottomed at 3,850 feet, flowed 37 bbls. of oil in one hour and was a completion.

Ohio Oil Co. No. 4 Laughlin, section 9-20-37, on the east edge of the Monument field, had pay at 3,820-3,905 feet, total depth, was acidized and shot and flowed at the rate of 120 bbls. of oil daily.

Other recent completions in Lea County: J. V. Brown No. 1 Parcell, C NW SE section 8-21-38, wildcat, averaged 22 bbls. of fluid daily for 10 days after plugging back from 4,401 feet, total depth, to 4,391 feet, then started producing about 95 per cent basic sediment and was shut in and temporarily abandoned. Sulfur water was found at 4,397-4,401 feet.

Empire Oil & Refining Co. No. 2 Walden, section 21-22-37, topped pay at 3,460 feet, total depth 3,617 feet, flowed 110 bbls. of oil through casing in 24 hours. Mid-Continent Petroleum Corp. No. 2 Greer, NW section 21-22-36, pay 3,760 feet, total depth 3,830 feet, flowed 1,520 bbls. of oil through open tubing in 24 hours, with 3,000,000 feet of gas. Repollo Oil Co. No. 11 Fowler, section 9-24-37, pay 3,465 feet, total depth 3,575 feet, flowed 580 bbls. of oil through casing in 24 hours, with 2,000,000 feet of gas. Same company's No. 4-B Phillips, NW SW NW section 31-19-37, pay 3,842 feet, total depth 3,920 feet, flowed 694 bbls. of oil through tubing in 24 hours.

Skelly Oil Co. No. 3 R. R. Sims, SE section 4-23-37, pay 3,515 feet, total depth 3,670 feet, flowed 57 bbls. of oil daily through tubing. Same company's No. 5 R. R. Sims, SW section 3-23-37, pay 3,514 feet, total depth 3,610 feet, flowed 156 bbls. of oil through tubing in 24 hours, with 1,500,000 feet of gas. Sun Oil Co. No. 1 Barr, SW section 24-19-36, pay 3,956 feet, total depth 4,032 feet, acidized, flowed 32 bbls. of oil daily through tubing. Texas Co. No. 9 Lieu Lands, section 19-20-37, pay 3,745 feet, total depth 3,873 feet, acidized, flowed 480 bbls. of oil through choke in 24 hours. Herschback and others No. 1 Alston, C SW NE section 31-17-37, wildcat, was dry and abandoned at 5,300 feet, total depth.

Carper Drilling Co. No. 2 Gissler, section 23-17-30, Eddy County, was an abandoned location.

F. W. & Y. Oil Co. No. 1-B Stevens, NW section 13-17-28, Eddy County, was bottomed at 3,526 feet, perforated casing and acidized, and swabbed and flowed 80 bbls. of oil daily.

Dummitt Oil Co. No. 1 Todd, SE SE section 34-3n-29, wildcat in Roosevelt County, was reported abandoned at 810 feet, total depth.

Lea County

Amerada Pet. Corp. No. 1 Corrigan, SW SW NE sec. 4-22-37. Drlg. 3,400 ft.

Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. Drlg. 3,810 ft.

Amerada Pet. Corp. No. 4-T State, sec. 25-19-36. T.D. 4,055 ft.; shut in; may acidize.

Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-25-37. Drlg. 3,216 ft.

Anderson-Prichard Oil Corp. No. 1 Gregory, NW sec. 33-25-37. Rig.

Anderson-Prichard Oil Corp. No. 2 Langlie, SE sec. 8-25-37. Location.

Ajax Drlg. Corp. No. 1 Lanehart, SW sec. 21-25-37. Machine.

J. W. Brown No. 1 State, C SW SW sec. 22-21-24. Drlg. 1,080 ft.

Amon G. Carter No. 2 Elliott, C NE SW sec. 22-22-37. T.D. 3,622 ft.; testing.

Continental Oil Co. No. 1 Ailes, C SE SE sec. 35-20-38. T.D. 4,070 ft.; shut down.

Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat. T.D. 3,296 ft.; W.O.C.

Continental Oil Co. No. 2-A-5 Farney, C NE SE sec. 5-23-36. Drlg. 2,230 ft.

Continental Oil Co. No. 1 Jack, C NW NE sec. 27-34-37. Cellar.

Continental Oil Co. No. 1-A-17 Lockhart, C NW SW sec. 17-21-37. Drlg. 2,700 ft.

Continental Oil Co. No. 1-B-30 Lockhart, C SE SW sec. 30-21-36. Rigging up rotary.

Continental Oil Co. No. 2-B-10 Sanderson, NE SE NE sec. 10-20-36. Location.

Continental Oil Co. No. 1 State, C SW NW sec. 16-22-36. Drk.

Continental Oil Co. No. 1 Stevens, C SW NW sec. 34-23-36. Drlg. 3,066 ft.

Continental Oil Co. No. 1 Wantz, C SW SW sec. 21-21-37. T.D. 3,872 ft.; flowed 24 bbls. oil; S.I.

Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. T.D. 4,174 ft.; shut down for repairs.

Culbertson & Irwin No. 1 Boesche, NE sec. 2-21-32. Wildcat. T.D. 1,170 ft.; S.D. for casing.

Culbertson & Irwin No. 1 Humphreys, NE NW NE sec. 3-25-37. T.D. 1,107 ft.; shut down.

Culbertson & Irwin et al No. 1 Moseley, SE NE SW sec. 34-24-37. Drlg. 2,812 ft.

Devonian Oil Co. No. 2 Christmas, SE sec. 28-22-37. Rig.

Devonian Oil Co. No. 3 Christmas, C SW SE sec. 28-22-37. Cellar and pits.

Empire Oil & Ref. Co. No. 4 Clossen A, C SE SE sec. 6-22-36. Rig.

Empire Oil & Ref. Co. and Atlantic Ref. Co. No. 1 Hodges, NE cor. sec. 8-24-37. Derrick.

Empire Oil & Ref. Co. No. 1 Parsons, C SE SE sec. 27-19-36. Cellar and pits.

Empire Oil & Ref. Co. No. 1-G State, sec. 2-21-36. T.D. 3,900 ft.; shut down.

Empire Oil & Ref. Co. No. 2-G State, C SE SW sec. 2-21-37. Drlg. 3,720 ft.

J. E. Farrell No. 2-B Walden, C NE SW sec. 15-22-37. T.D. 3,465 ft.; drlg. by.

J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,665 ft.

Bert Fields No. 3 Turner State, NW sec. 32-20-37. Spudded.

Gulf Oil Corp. No. 1-E Arnott-Ramsey, C SW SW sec. 16-25-37. T.D. 3,236 ft.

Gulf Oil Corp. No. 2 Baker, SE sec. 5-22-37. Location.

Gulf Oil Corp. No. 4-F Bell State, sec. 36-20-36. Drlg. 2,580 ft.

Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; testing.

Gulf Oil Corp. No. 4 Campbell, sec. 7-21-36. Drlg. 3,298 ft.

Gulf Oil Corp. No. 2 Cole, C NE NE sec. 16-22-37. T.D. 1,141 ft.; shut down.

Gulf Oil Corp. No. 3 Cole, C SE NE sec. 16-22-37. Derrick.

Gulf Oil Corp. No. 5 Collins, sec. 14-21-36. Drlg. 3,485 ft.

Gulf Oil Corp. No. 1 Davis, sec. 8-23-27. T.D. 3,712 ft.; P.B. 3,702 ft.; fishing.

Gulf Oil Corp. No. 2 Day, NW sec. 6-22-36. Location.

Gulf Oil Corp. No. 1 Elliott, SW SE SE sec. 15-25-37. Rig.

Gulf Oil Corp. No. 2 Gramm State, C NW SE sec. 17-19-37. T.D. 1,390 ft.

Gulf Oil Corp. No. 1-D Janda, C NW SW sec. 2-21-36. Derrick.

Gulf Oil Corp. No. 3 King, NW sec. 28-21-37. T.D. 3,605 ft.

Gulf Oil Corp. No. 1 Knight, sec. 27-24-37. T.D. 3,574 ft.; shot.

Gulf Oil Corp. No. 2-C Kutter, NE sec. 18-19-37. Rig.

Gulf Oil Corp. No. 1 Monda, C SE SW sec. 21-22-37. Drlg. 2,315 ft.

Gulf Oil Corp. No. 1 Rinewalt, NW sec. 4-22-37. Location.

Gulf Oil Corp. No. 1 Shipp, C SE NW sec. 21-19-37. Drlg. 3,180 ft.

Gulf Oil Corp. No. 1 Sticher, C SE SW sec. 4-22-37. Derrick.

Gulf Oil Corp. No. 2 Westfall, SE sec. 15-25-37. Drlg. 3,425 ft.

Gulf Oil Corp. No. 1-B White, SE sec. 35-20-36. Derrick.

Homestead No. 1 Clifford, SW sec. 12-26-32. Wildcat. Location.

Humble O. & R. Co. No. 1 Fopeano, C SE SW sec. 25-20-36. Drlg. 3,000 ft.

Humble O. & R. Co. No. 2-G State, C NE NW sec. 23-21-36. Derrick.

Humble O. & R. Co. No. 1 Williams, C SE NE sec. 34-24-37. T.D. 733 ft.; set casing.

Jal Nat. Gas Corp. No. 2 Justis, NE sec. 20-25-37. Drlg. 2,435 ft.

Landreth Prod. Co. No. 3 Grizzell, C NW SW sec. 5-22-37. Rig.

Magnolia Pet. Co. No. 4 Carson, SW sec. 28-21-37. Drlg. 3,415 ft.

Magnolia Pet. Co. No. 3 Cary, sec. 21-22-37. Drlg. 3,550 ft.

Magnolia Pet. Co. No. 4 Cary, C SW SW sec. 21-22-37. Derrick.

Magnolia Pet. Co. No. 1 Hanna, sec. 7-26-38. Wildcat; drlg. 3,858 ft.

Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 24-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.

Maljamar O. & G. Co. No. 3 Mitchell, C SE NE sec. 20-17-32. Drlg. 2,950 ft.

J. A. Mascho No. 1 Cloyd, C SE SE sec. 20-22-33. Wildcat; derrick.

McDonald & Weiner No. 1 Elliott, SE cor. sec. 19-21-37. Derrick.

Mid-Continent Pet. Corp. No. 1 Owen, C NW NW sec. 3-22-37. Drlg. 1,560 ft.

Frazier Moss et al No. 1 Flint, C NE NE sec. 29-20-34. Wildcat; cellar and pits.

Ohio Oil Co. No. 3 State-Hansen, C W½ NE NE sec. 16-20-37. Rig.

Ohio Oil Co. No. 7 State-McDonald, C SW SE sec. 16-22-36. T.D. 3,044 ft.; fsg.

Ohio Oil Co. No. 3 State-McGrail, NE sec. 27-19-36. Loc.

Ohio Oil Co. No. 2 Turner, SW NW SE sec. 29-21-37. Drlg. 760 ft.

Phillips Pet. Co. No. 1 Lea, C NW NW sec. 30-17-34. Wildcat; location.

Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.

Plains Prod. Co. No. 2 Moseley, SE sec. 34-22-37. Loc.

Repollo Oil Co. No. 6 Byrd, NE NW SW sec. 11-20-36. Drlg. 1,312 ft.

Repollo Oil Co. No. 2 Christmas, sec. 28-22-37. Drlg. 2,400 ft.

Repollo Oil Co. No. 3 Jamison, SW NE NE sec. 21-24-37. T.D. 710 ft.

Repollo Oil Co. No. 1 Turner, sec. 29-21-37. Drlg. 2,000 ft.

Repollo Oil Co. No. 1 White, SE sec. 24-20-36. Loc.

Republic Prod. Co. No. 1 State, SE sec. 12-21-35. Drlg. 3,555 ft.

Rowan Drlg. Co. No. 1-A Elliott, SW sec. 27-22-37. T.D. 1,170 ft.

Rowan Drlg. Co. No. 1 Walden, C NW NW sec. 15-22-37. T.D. 3,425 ft.

Rowan Drlg. Co. No. 2 Walden, C NE NW sec. 15-22-37. Derrick.

Samedan Oil Co. No. 3 Hugnes, sec. 4-23-27. T.D. 3,631 ft.

Schermerhorn Oil Co. No. 1 Woolworth, C NW NE sec. 28-24-37. T.D. 3,477 ft.; est. 1,000 bbls. oil.

Shell Pet. Corp. No. 1 Rinewalt, NW sec. 4-22-37. T.D. 3,500 ft.

Shell Pet. Corp. No. 4-M State, C Lot 15, sec. 1-21-35. Drlg. 1,800 ft.

Skelly Oil Co. No. 1 Baker, C NW NW sec. 26-22-37. Derrick.

Skelly Oil Co. No. 1-B Harrison, C NE NW sec. 9-23-37. Drlg. 2,700 ft.

Skelly Oil Co. No. 2-B Harrison, C NW NW sec. 9-23-37. Derrick.

Skelly Oil Co. No. 1 Hill, C Lot 7, sec. 6-21-37. Rigging up rotary.

Skelly Oil Co. No. 2 G. W. Sims, C NW NE sec. 9-23-37. Machine.

Skelly Oil Co. No. 3 H. O. Sims, NW sec. 3-23-37. Drlg. 2,760 ft.

Stanolind O. & G. Co. No. 5-A Gillully, NE sec. 25-20-36. Rig.

Stanolind O. & G. Co. No. 1 Hill, C Lot 16, sec. 5-21-36. T.D. 3,760 ft.; flowed 10 bbls. in 8 hrs.

Stanolind O. & G. Co. No. 2 McQuatters, C NW NE sec. 11-21-36. Drlg. 3,100 ft.

Stanolind O. & G. Co. No. 1-B Meyers, C NW NW sec. 7-24-37. Loc.

Stanolind O. & G. Co. No. 3 Meyers, SE sec. 4-24-37. T.D. 3,482 ft.

Stanolind O. & G. Co. No. 8 Terry, C NW SE sec. 9-19-38. Location.

W. H. Street No. 2 Wood, C SW NE sec. 22-22-37. Drlg. 150 ft.

Sun Oil Co. No. 3 Stuart, C NE NE sec. 15-25-37. T.D. 3,190 ft.

Texas Co. No. 1 Keonane, C NE NE sec. 18-19-37. Drlg. 1,910 ft.

Texas Co. No. 11 Lieu Lands, C NW NW sec. 20-20-37. T.D. 3,700 ft.

Texas Co. No. 12 Lieu Lands, C SW SW sec. 20-20-37. Rig.

Texas Pacific C. & O. Co. No. 4-A State, C SW SW sec. 9-22-36. Drlg. 3,000 ft.

Tide Water Associated Oil Co. No. 1-K State, SW sec. 13-20-36. Loc.

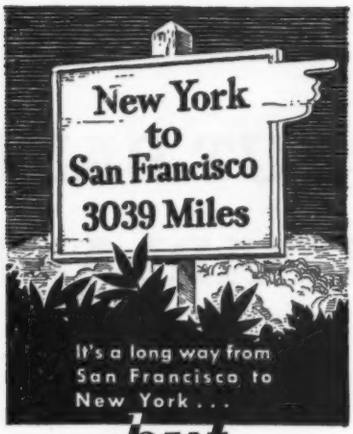
Tide Water Associated Oil Co. No. 3-J State, C SE NW sec. 17-19-37. Drk.

Tide Water Associated Oil Co. No. 3 Walden, sec. 21-22-37. T.D. 3,615 ft.; cleaning out.

Western Gas Co. No. 3 Harrison, C NW SW sec. 20-24-37. T.D. 311 ft.

Western Gas Co. No. 4 Harrison, C NW SW sec. 29-24-37. Spudded.

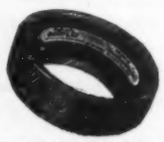
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 3,870 ft.



but
these DARCOVA
VALVE CUPS
traveled 3878 Miles
in the Oil Pumping
Service

The place—Tulsa, Oklahoma. The time—from May 26th, 1925 until October 23rd., 1935 . . . . during which time the pump was operated three or four hours a day —6 days per week at a speed of 15 or 16 strokes per minute. It took a little mathematics to arrive at the actual *mileage* of this single set of valve cups. But it shouldn't take *any figuring* on your part to arrive at the conclusion that THE ORIGINAL COMPOSITION VALVE CUPS eliminate frequent re-cupping.

DARCOVA (Orange Label) the standard for more than thirty years under severe service at all depths.



DARFLEX (Green Label) the popular favorite for wells at 800 feet in depth.

DARVAL (Blue Label) for super-service in wells to approximately 2,000 feet in depth.

Manufactured Only By

DARLING VALVE & MFG. CO.

Williamsport, Pa.

World's Largest Marketers of

PETROLEUM COKE

INQUIRIES AND OFFERS INVITED

GREAT LAKES COAL & COKE CO.

30 Rockefeller Plaza, New York, N. Y.

GENERAL OFFICES

Standard Oil Co. (Ind.) Bldg., Chicago, Illinois

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 55 ft.; M.I.M.
Barnsdall Oil Co. No. 5 Dodd, sec. 22-17-29. T.D. 2,757 ft.; P.B. 2,730 ft.; est. 60 bbls. oil.
Barnsdall Oil Co. No. 6 Dodd, sec. 22-17-29. Drlg. 2,575 ft.
Fred Brainerd No. 2 Brainerd, sec. 5-18-27. Drlg. 185 ft.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. Drlg. 300 ft.
T. D. Collins No. 1 Weller, C NW NW sec. 13-24-36. T.D. 710 ft.; shut down.
Continental Oil Co. No. 1 Etz, C NW NE sec. 24-16-30. Drlg. 70 ft.
Continental Oil Co. No. 1 Keyes, C NW NE sec. 28-20-30. Drlg. 1,200 ft.
William Dooley No. 1 Featherstone, NE NW NW sec. 24-20-26. Drlg. 512 ft.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,800 ft.
Franklin Pet. Corp. No. 1 Nelson, NW sec. 4-18-30. Wildcat; drlg. 2,630 ft.
F. W. & Y. Oil Co. No. 4 Gissler, C SE SE sec. 14-17-30. T.D. 2,961 ft.; set 7-in. csg.
F. W. & Y. Oil Co. No. 5 Gissler, C NE SE sec. 14-17-30. Drlg. 3,085 ft.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. Drlg. 2,512 ft.
F. W. & Y. Oil Co. No. 4-A Jackson, NE sec. 13-17-30. Rig.
F. W. & Y. Oil Co. No. 5-A Jackson, NE sec. 13-17-30. Location.
F. W. & Y. Oil Co. No. 3-X Jackson, SE sec. 13-17-30. Drlg. 1,130 ft.
F. W. & Y. Oil Co. No. 2-A Stevens, C NW SW sec. 13-17-30. Location.
F. W. & Y. Oil Co. No. 3-A Stevens, NW sec. 13-17-30. Drlg. 1,200 ft.
F. W. & Y. Oil Co. No. 2-B Stevens, NW sec. 13-17-30. Rig.
Grayburg Oil Co. No. 3 Keely, SE NE NE sec. 24-17-29. Drlg. 3,000 ft.
H. & W. Drlg. Co. No. 1 Danford, C SE SE sec. 9-22-29. Drlg. 2,480 ft.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. Drlg. 450 ft.
Harry Leonard No. 10 State, SE SW SW sec. 27-17-29. Drlg. 2,650 ft.
W. A. Nichols No. 1 Johnson, NE sec. 35-16-21. Wildcat. Running csg. to 822 ft.
Pool Oil & Gas Co. No. 1 Reed, SW sec. 28-24-28. Wildcat. Spudded.
Repollo Oil Co. No. 1-D Parke, sec. 15-17-30. Drlg. 3,270 ft.
Paul Sargent No. 1 State, NE sec. 16-17-31. Drlg. 780 ft.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 575 ft.; shut down.
Superior Oil Co. No. 1 Foster, SE SE NE sec. 17-17-31. Location.
Tigner, Etz & Keyes No. 2-B Keyes, NW sec. 10-17-28. Location.
Neil H. Wills No. 1 State, C NW NW sec. 20-20-30. Drlg. 294 ft.

Chaves County

English & Harmon No. 1 Billingslea, SE sec. 9-15-29. T.D. 2,870 ft.; shut down.

Curry County

Bond & Harrison No. 1 Hart Ranch, C NW SE sec. 13-2n-31. T.D. 1,246 ft.; W.O.S.T.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft.; fishing.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8. T.D. 263 ft.; shut down.
Fred Turner No. 1 Evans, NW NW SW sec. 22-14-12. O.W.D.D.; wildcat; drlg. 2,885 ft.

Roosevelt County

C. B. Peterson No. 1 Goode, NW SE SE sec. 28-5s-30. Bldg. rig.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. Drlg. 3,450 ft.

San Juan County

The Continental Oil Co. No. 21 Tribal, NW NW NW section 2-29n-19w, Rattlesnake pool, an old well drilled deeper from 788 feet, was dry and plugged and abandoned at 935 feet.

Red Butte Oil Co. No. 1 Govt., C SW SW sec. 6-21n-13w. M.I.M. (first report).
Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. T.D. 620 ft.; fshg.
Jack Amenda No. 4 Hart, NW NE SW sec. 35-30n-12w. T.D. 1,922 ft.; trying to free pipe.

Socorro County

R. Allen Brown, Tr., No. 1 Belen Ld. Gr., SE NW sec. 16-2n-1e. Spd. to 65 ft. and S.D. to R.U.R.

Torrance County

Chief O. & G. Co. No. 1 Pace, SE sec. 12-6n-7e. S.D. 795 ft. for repairs.

Valencia County

C. A. Grober et al No. 1 Fuqua, NE NE sec. 19-5n-3e. Drlg. L. 625 ft.; S.O.&G. 610 ft.
Big Three Oil Co. No. 1 San Clemente Grant, sec. 5-6n-1e. R.U.R. (first report).

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE cor. sec. 27-3s-64w. S.D. 4,345 ft.; W.O. tools.

Archuleta County

The William E. Hughes Estate and Continental Oil Co. No. 1 Burns, unsurveyed land in Township 32n, Range 4e, drilling at 1,170 feet.

Boulder County

Boulder Prod. & Dev. Co. No. 1 Harlow Est., SE NE sec. 36-2n-71w. T.D. 719 ft.; rmg. to run pipe to bottom.
J. B. Furstenberg No. 1 Foote, SE sec. 20-1n-70w. Cmtd. 8¼-in. at 200 ft.; drlg. plug.

Bent County

Indian Terr. Ill. Oil Co. and Olson Drlg. Co. No. 1 Arbes, C Lot 2, sec. 2-21s-48w. Drlg. 435 ft.

Fremont County

Utex Oil Co. No. 1, C SE SW sec. 20-20s-69w. Spdg.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE sec. 36-7s-88w. Cmtd. 15½-in. at 53 ft.

Kiowa County

Morgan & Flynn et al No. 1 Hostetter, C NW SE sec. 6-20s-46w. R.U.R.

Larimer County

Great West O. & G. Corp. No. 1 Haworth, C SW SE sec. 16-4n-69w. Drlg. below 200 ft. in Pierre sh. in 15½-in. hole.

Mesa County

Midwest Drlg. & Dev. Co. No. 1 Callahan, NE NW SE sec. 30-8s-97w. Drlg. below 100 ft.

Moffat County

The joint test of the Universal Consolidated Oil Co. and Italo Petroleum Corp. in their No. 1 Wanner-Government, C SE NE section 36-12n-98w, Powder Wash field, will not be drilled. Rotary material is being moved out and will be shipped to Wyoming. Location was more than a mile to the southwest of the Mountain Fuel Supply Co. No. 1 Donnell, which is itself a semi-wildcat and which showed salt water, a little gas and scums of oil in the horizon at 5,245-5,336 feet. It is, however, coring deeper and was still in the Lower Wasatch at 5,466 feet.

Morapas Pet. Co. No. 1 Coles, SW SW SE sec. 1-3n-92w. Cmtd. pipe at 1,310 ft. to S.O.W. at 1,225 ft.
Mountain Fuel Supply Co. No. 1 Donnell, C SE NE sec. 31-12n-97w. Cg. 5,466 ft.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. S.D. 2,500 ft.; W.O. rotary tools.
Anderson-Kerr Drlg. Co. No. 1 Marrs, C SE NE sec. 17-11n-100w. Drlg. below 1,000 ft.
Texas Co. No. 4 Iles Inv. Co., Lot 7, sec. 23-9n-92w, Iles field. Drlg. 3,314 ft. in sh. and sd.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NW sec. 31-36n-17w. T.D. 3,960 ft.; U.R. 6⅝-in. to bottom.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; shot with 10 qts.; exploded prematurely; C.O. to shoot again.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. Drlg. 4,805 ft.

Pitkin County

Glenco Dev. Co. No. 1Christiana, NW cor. sec. 9-10s-89w. Cmtd. 15½-in. at 56 ft.

Rio Blanco County

Texas Co. and California Co. No. 1 Unit, SW SE NW sec. 35-3n-94w. Drlg. 360 ft. in sh.

LaPlata County

Nick Spatter No. 1 Bryce, SE SW SW sec. 31-33n-9w T.D. 150 ft.; U.R. 12½-in. to S.O.W. at 42 and 102 ft.

WYOMING

Albany County

The Murphy Oil Co. has released location for its No. 8 Holst in the Quealy pool. It is an outside well on the southwest, a southwest offset to its No. 3 Holst.

Murphy Oil Co. No. 8 Holst, C SW SE sec. 13-17n-77w. Loc. (first report).
Hal Blakeman No. 1 Chapple, C NE NW sec. 33-21n-67w. T.D. 1,681 ft.; installing heavier equip.
Murphy Oil Co. No. 1 Holst-Woolf, NW NW NW sec. 19-17n-76w. T.D. 4,067 ft.; tstg. Dakota through perforated 7-in.
Murphy Oil Co. No. 4 Wilson, NW NW SW sec. 18-17n-76w. Drlg. 2,250 ft. in sh.

Big Horn County

Ohio Oil Co. has a good completion on the Garland dome in its No. 1 Smith, NE cor. Lot 61, CNL SE SE section 33-56n-97w, in the Madison lime at 4,000-94 feet. It flowed 374 bbls. first 24 hours through the casing. This makes five Madison lime wells in the unitized area of the Garland dome. Before this well was completed the other four were rated at more than 1,600 bbls. daily under restricted flow. The new well is a little to the north of the Stock Oil Co. No. 1 Griffin, in section 4-55n-97w, completed last winter for 740 bbls. per day at 4,200 feet after acidizing. This well is outside the unitized area. The Ohio Oil Co. is preparing to build a fuel oil and asphalt plant near Lovell for the making of road oil from the Garland-Byron wells.

Two new locations on the Byron dome were released by the Ohio Oil Co.

Ohio Oil Co. No. 3 Sidon Canal, Lot 40, NW SW sec. 24-56n-97w. Loc. (first report).
Ohio Oil Co. No. 2 Couzzens, Lot 40, SE SE sec. 23-56n-97w. Loc. (first report).
Joan Oil Co. No. 1 Howell, NE NW NE sec. 32-55n-97w. Resumed; drlg. 1,400 ft.
Big Horn Pet. Trust No. 1 Parker, C SW SW sec. 23-49n-89w. Drlg. 1,370 ft. in Deadwood form.
Yale Pet. Corp. No. 1 Stock-Jones, SE cor. Lot 52-56n-97w. Drlg. 3,580 ft. in sh.

Ohio Oil Co. No. 2 Byron-Baker, SW NW sec. 23-56n-97w. Drlg. 3,101 ft.
Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. Drlg. 4,035 ft.
Ohio Oil Co. No. 1 Smith, NE cor. Lot 61, sec. 33-56n-97w. T.D. 4,094 ft.; cmtd. 7-in. at 4,000 ft.; cd. nearly 100 ft. of sat. Madison lime.
Woods-Callahan Oil Co., Ltd., and Wyoming O. & R. Co. No. 1 Evans, NE NE NW sec. 12-44n-91w. Drlg. 1,950 ft.; top Embar 1,900 ft.

Campbell County

G. J. Sherin et al No. 1 Rodes, NE SE SW sec. 24-49n-74w. Drlg. 500 ft.

Carbon County

The Ohio Oil Co. released location in the Rock River field for its No. 12 Harrison & Cooper. It is an inside location for the Sundance pool on the southeastern side of the pool.

Ohio Oil Co. No. 12 H. & C., SE SW sec. 35-20n-78w. Loc. (first report).
Sinclair-Wyoming Oil Co. No. 11 Wertz, SE NW NW sec. 7-26n-89w. Drlg. 2,565 ft.
Ohio Oil Co. No. 1 Wyo. O. & G. Co., C SE SW sec. 29-27n-89w. Spdg. 150 ft.
Producers Oil Co. No. 1, CNL sec. 14-20s-88w. Drlg. 194 ft.
Ohio Oil Co.-California Co. No. 5 Cronberg-U. P., C NW NW sec. 25-21-79w. Drlg. 960 ft.
Ohio Oil Co. No. 1 Union Pacific, C NW NW sec. 20-21n-80w. Drlg. 479 ft.
Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec. 26-21n-79w. Drlg. 1,475 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. T.D. 2,347 ft.; P.B. to second Sundance at 2,140-80 ft.; shot with 40 qts.; tstg.
Ohio Oil Co.-California Co. No. 4 Union Pacific, C SW SW sec. 25-21n-79w. Shot 10, 10 and 10 qts. in Upper Sundance; C.O.
Ohio Oil Co.-Medicine Bow Oil Co. No. 1 U. P.-Wister, C NW SW sec. 17-22n-78w. Drlg. 1,522 ft.
Ohio Oil Co. No. 8 Dixon, SE NE SE sec. 34-20n-78w. Drlg. 5,400 ft.

Converse County

Wyoming Southern Oil Co. No. 3 Salisbury, SE SE NE sec. 27-32n-69w. Spdg. (first report).
Elbe Oil Ld. & Dev. Co. No. 1 Benham, NW NE sec. 5-31-70w. M.I.M. (first report).
Tom Carney No. 1 Beaver, SE SE SW sec. 28-35n-68w. M.I.M.
Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. Drlg. 3,600 ft.

Fremont County

Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Cg. 7,363 ft. in hd. Dolomite.
H. Kenyon Burch. No. 1 Enos, CEL NE NE sec. 28-3n-1w. S.D.O. 970 ft.; no shows.
Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. Drlg. 115 ft.

Johnson County

The Carter Oil Co. No. 3 Rider, a deep test in the Billy Creek gas field, topped the Sundance at 5,047 feet and at 5,103 feet the cores failed to show any oil or gas saturation. The basal Sundance will be cored within the next 80 feet and if nothing of importance shows up, the test will be continued on down to the Pennsylvanian. Billy Creek produces gas from the Frontier and the No. 3 Rider is close to No. 2 Rider, completed in 1927 for 70,000,000 feet a day.

Carter Oil Co. No. 3 Rider, C NW SE sec. 17-48n-82w. Cg. 5,103 ft.

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-11w. T.D. 1,151 ft.; lowering 8⅝-in. to 1,130 ft. to test S.O. at 1,140-51 ft.

Natrona County

Stanolind O. & G. Co. No. 1 T.P., C NW SE sec. 26-40n-79w. Drlg. 3,472 ft. in r.b.
Wyalta Oil Co. No. 4 Govt., NW NW sec. 5-29n-81w. Cmtd. 6⅝-in. on top Sundance at 1,082 ft.; rng. 2-in. tbg. to test at 1,030-72 ft.
Wyalta Oil Co. No. 5 Govt., SW SW sec. 30-30n-81w. Tstg. at 1,021 ft.
Wyalta Oil Co. No. 6 Govt., NE SE NW sec. 5-29n-81w. Cmtd. 10-in. at 704 ft.; Dakota at 565-664 ft.
Empire State Oil Co. No. 16, NW SW sec. 12-33n-83w. Drlg. 1,137 ft.; Poison Spider Dist. (first report).

Niobrara County

The Continental Oil Co. No. 4-B Schuricht, reported a completion last week, gauged 640 bbls. per day and 1,380,000 feet of gas through open tubing and 1,050 bbls. and 2,042,000 feet through the casing from the Sundance.

Ohio Oil Co. No. 2 Taylor-O.P.C.-32, NW NW SW sec. 3-35n-65w. Drlg. 3,598 ft.
Ohio Oil Co. No. 2 Leo-O.P.C., NE NE SE sec. 35-36n-65w. R.U.R.
Ohio Oil Co. No. 1 Leo-O.P.C.-7, NW NW SE sec. 35-36n-65w. Redrlg. 2,400 ft.
Ohio Oil Co. No. 10 Lamb-Acct. 2, C NE SE sec. 5-35n-65w. T.D. 315 ft.; cmtd. 12½-in. at 200 ft.
Continental Oil Co. No. 1 Leach, SW NE NE sec. 29-36n-64w. Drlg. 2,645 ft.
Argo Oil Co. No. 4 Ford, SW NW SE sec. 33-36n-65w. Drlg. 3,300 ft.
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 6-35n-65w. No report (mystery well).
Continental Oil Co. No. 8 Otto Rohiff, SW SW SE sec. 31-36n-65w. Drlg. 655 ft.
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. Drlg. 5,255 ft.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. Drlg. 4,060 ft.
J. M. Huber Corp. No. 1 Lamb, SE SE SW sec. 27-36n-65w. S.D. 2,725 ft.

Park County

Resolute Oil Co. No. 1 Northern Pacific, C NE NW sec. 21-57n-101w. R.U.R.
Kinney-Coastal Oil Co. No. 3 Govt., SW NW NE sec. 24-56n-97w. Cg. 4,390 ft. in Madison.
Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. Drlg. 5,150 ft.
Texas Co. No. 4 Sonners, SE cor. sec. 29-51n-100w. Drlg. 1,200 ft. in blk. sh.
General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. T.P. 6,076 ft.; P.B. to Tensleep; C.O.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. T.D. 2,385 ft.; fshg. two strings.

Sweetwater County

A well being drilled for water for its deep test on the Cherokee Ridge anticline by the Mountain Fuel Supply Co. encountered a flow of gas at 200 feet. It gauged 200,000 feet a day, but was soon exhausted. Another flow was encountered at 300 feet. It became ignited and burned down the water well rig, which is being replaced. Location for the deep test is on the W. L. Williams permit in the C NE NE section 5-12n-95w, about 15 miles in an air line northeast of the Powder Wash oil pool on the Colorado side.

Mountain Fuel Supply Co. No. 1 Williams, C NE NE sec. 5-12n-95w. M.I. rig (first report).
Mountain Fuel Supply Co. No. 1 Stone, C SW SW sec. 18-19n-103w. T.D. 3,543 ft. in Sundance; 8⅝-in. at 3,535 ft.; tstg.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SE NE sec. 29-15n-104w, S of Baxter Basin. Loc. (first report).

Weston County

The Osage Trust Co. No. 1, NW cor. section 22-46n-63w, was dry at 220 ft.

Osage Trust Co. No. 2, C NW NW sec. 22-46n-63w. Drlg. 100 ft.
H. D. Wiltse No. 13, SE NE NW sec. 17-46n-63w. Drlg. below 420 ft.; S.O. and G.
T. L. Hopkins No. 1, CNL NE NE sec. 36-47n-63w. Spdg.
Big Indian O. & D. No. 1 George, SW SE NW sec. 26-48n-64w. Drlg. 115 ft.

MONTANA

Production of Montana fields in May, as reported by the State Oil Conservation Board, was 579,887 bbls., an increase of 33,466 bbls. as compared with April. Storage at the end of May was 1,369,719 bbls., a decrease of 77,159 bbls.

Big Horn County

Big Horn O. & G. Co. No. 31, CWL SE NW sec. 23-1s-33e. Drlg. 625 ft.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. S.D. 3,950 ft.

Blaine County

Nadeau Bros. No. 1 fee, NW NW SE sec. 33-34n-17e. Cmtd. pipe at 525 ft. to S.O.W. in Eagle sd.

Carbon County

R. C. Tarrant No. 1 Heare, CWL NE NW sec. 14-6s-19e. Spdg. 103 ft.
Ohio Oil Co. No. 16 Kirt, C SE SE sec. 4-7s-21e. Drlg. 3,106 ft.
Geo. Muth et al No. 1, CSL SE SE sec. 23-6s-23e. Drlg. 1,565 ft.

Carter County

Tower Oil Trust No. 1, C SW NW sec. 8-9s-61e. Drlg. 126 ft.

Cascade County

C. Leonard Smith No. 1-A Smith-Schwingle, NE NE SW sec. 14-22n-2e. Asked for bids from rotary contractors to deepen from 620 ft.

Fallon County

Nagasco Corp. No. 1, SE sec. 34-5n-6e. Drlg. 720 ft.

Glacier County

Frank R. Henry and associates, of Chicago, have made a location for a deep rotary test on the Chalk Butte structure west of the Cut Bank field. Contract has been let to Manning & Martin, Inc., and they are moving in. Last month Mr. Henry purchased leases on 9,960 acres of Blackfeet Indian tribal and allotted land and acquired 1,280 acres on top of the dome from Joseph S. Irwin, thereby obtaining a solid block. Contract provides for a test, if necessary, to the Madison lime at 4,100 feet. W. E. Ullman, a member of the Chicago Board of Trade, is associated with Mr. Henry in the undertaking.

There was one completion in the Cut Bank field in the Montana Headlight Oil Co. No. 5 Britton, SE SW NE section 14-34n-6w, which had only a show of oil in the Cut Bank at 2,860-2,905 feet and was plugged and abandoned.

The Texas Co. No. 2 Hardwick, C NE SE section 17-32n-5w, a completion last week, but not tested, swabbed 95 bbls. first 16 hours after a shot.

Frank R. Henry et al No. 1 Walker, C SW sec. 35-36n-8w. M.I.M. (first report).
Texas Co. No. 2 State (M-455), C SW NW sec. 16-32n-4w. Cmtd. 10¾-in. at 410 ft. (first report).
Glacier Prod. Co. No. 1 Long, CWL NE NW sec. 22-32n-5w. R.U.
Glacier Prod. Co. No. 1 Morgan Unit, NE NE SE sec. 33-34n-5w. Drlg. 340 ft.
Hannah-Porter No. 4 All.-130, CWL SW SE sec. 6-32n-5w. Cmtd. 10¾-in. 586 ft.; Colo. 567 ft.

★$1,000,000.00

SUPPLY BUSINESS

For SALE

★ **Reason for selling—Principal stockholders desire to retire. Company well established earning more than $200,000.00 annually. Reason for this blind ad obvious. Write Box H-870 The Oil and Gas Journal for detail information.**

You Lose Money Every Summer

A man's working efficiency drops to 10% when the thermometer gets up to 110°. . . . Keep your men cool and your production up with a breeze from **Coppus Heat Killers.**

They are the only kind of man-cooling fan that actually *directs* the cool air on the job and *prevents recirculation* of stale air.

Both types are portable, and can be used for cooling, drying, driving out foul air, etc. Write for Bulletin 160-4.

AEROPLANE — moves 15,000 cubic feet of air a minute at moderate speeds. (Other sizes also available.)

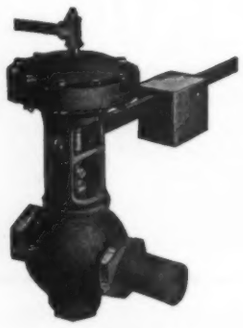
VANO — shoots a blast of air at high velocity. 1500 cubic feet of air a minute. (Other sizes also available.)

FRESH AIR
FOR MEN AND MACHINES
COPPUS

COPPUS ENGINEERING CORPORATION, 354 Park Ave., Worcester, Mass. *Branches in* oil centers, *representatives* in principal Cities. See listing in Thomas' Register.

In Composite Catalog—Steam Turbines, Air Filters, Blowers, Heat Killers.

Discharge Control is Precise and Unfailing



Throttling Regulator

When you set the C-F Throttling Regulator, you fix a limit above which the discharge pressure of your gas cannot rise. When that point is reached, suction is definitely throttled. Action is immediate, positive, and unvarying in results. The Throttling Regulator is one of a great many types of C-F devices for pressure control, covering all requirements of the gas industry, and used with success for fifty years.

Complete Catalog mailed on request

CF

THE CHAPLIN-FULTON MFG. CO.

28-40 Penn Ave. Pittsburgh, Pa.

A SIZE AND TYPE FOR EVERY PURPOSE

FRANCKE • GEAR TYPE

WALDRON

FLEXIBLE COUPLINGS

These strong steel couplings are in general use wherever drives are subject to shock loads or vibration. Their design and construction make them about as trouble-free as it is possible to build a flexible coupling. MEDIUM DUTY type for small bore; TORQUE RING for heavy duty; Mill Motor type; Floating Shaft type; FRANCKE Standard and Special Types.

Write for catalog or services of our Engineering Department that welcomes the opportunity to advise you on your requirements.

JOHN WALDRON CORPORATION

NEW BRUNSWICK • NEW JERSEY

New York Pittsburgh Chicago Portland, Ore.

CLEAN WATER

—is not so easy to find in the Oil Fields. But it is easy to keep boiler and engine water free from scale and corrosion with—

SAND BANUM

"The Entirely Different Boiler and Engine Treatment"

A FEW OUNCES of this pure colloidal concentrate from one to four times per month will assure the production of economical steam.

Write today for "HOW and WHY!"

AMERICAN SAND-BANUM COMPANY, Inc.

9 Rockefeller Plaza New York City

Stocks carried by

WESTERN SAND-BANUM COMPANY

Houston, Texas Fresno, Calif.

and at other convenient points including leading supply houses.

NATIONAL AIROIL BURNER COMPANY

ESTABLISHED 1912 INCORPORATED 1917

Manufacturers Installation Engineers Sales - Service

Industrial Oil Burners Gas Burners and Furnace Equipment

NAIROIL Automatic Oil Burners for HOMES APARTMENT HOUSES CHURCHES, STORES FACTORY BUILDINGS OFFICE BUILDINGS

Offices and Salesrooms 1325-27 Girard Avenue

Factory L St. & Sedgley Avenue

Philadelphia, Pa.

Straighten Out... those CROOKED Holes *with*

SPERRY - SUN Well-Surveying Instruments

Write for literature.

SPERRY-SUN WELL SURVEYING CO.

1608 Walnut St. Philadelphia, Pa.

Tulsa, Okla., 425 Petroleum Building
Houston, Texas, 3118 Blodgett Avenue
Long Beach, Calif., 549 East Bixby Road, (3800 Block—Atlantic Ave.)

Santa Rita O. & G. Co. No. 1 Lahr, C SE SE sec. 27-33n-5w. Rdy. to spd.
Glacier Prod. Co. No. 1 Barrington, 820 ft. from N line and 2,640 ft. from W line, sec. 19-33n-5w. Drlg. 1,165 ft.; Colo. 560 ft.; 10¾-in. 566 ft.
Glacier Prod. Co. No. 1 Connolly A-20, C SE SE sec. 30-34n-5w. Drlg. 2,655 ft.
P.M.K. Co. No. 3 Haglund, Sr., SE NW NE sec. 14-34n-6w. Cmtd. 7-in. 2,836 ft.
Wm. Hanlon No. 3 All.-128, CWL SW NE sec. 12-32n-6w. Drlg. 1,720 ft.
Texas Co. No. 2 Tweedy, C NE NW sec. 21-35n-6w. Drlg. 2,470 ft.
A. B. Cobb No. 5 Walburger, C NE SE sec. 35-35n-6w. R.O.G. (first report).
Grant Oil Co. No. 1 Rueffen, C SW SE sec. 5-32n-5w. Drlg. 975 ft.; 10¾-in. 510 ft.
R. C. Tarrant No. 4 Reickhoff, NE NE SE sec. 22-32-6w. Drlg. 2,900 ft.
K. D. Pardee No. 1 Corrigeaux, NE NE SE sec. 35-34n-6w. Cmtd. 7-in. at 2,960 ft.; S.D.
A. R. Pardue No. 1 Anderson, C SE SW sec. 31-32n-5w. T.D. 2,740 ft.; recmtg. surf. pipe.

Petroleum County

H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 819 ft.
O. B. Canfield No. 1 Govt., CEL SE NE sec. 21-17n-24e. Rng. 3-in. to set at 750 ft.

Roosevelt County

John W. Schmidt et al No. 1 Frue, NW NW NE sec. 21-28n-50w. Drlg. 612 ft.

Toole County

There were four completions and six new operations in the Kevin-Sunburst field.

Leo Sweeney No. 5 Davis, NW NE SW section 27-35n-3w, in the west end of the field, which flowed over the top of the rig and then went dead, cemented the bottom of the hole in which there was a crevice, drilled the plug and acidized with 1,000 gallons.

A. C. Crumley No. 12 Shaw, NE NW NE section 35-36n-2w, is pumping 30 bbls. daily from the Sunburst sand at 1,568-1,608 feet after shot with 40 quarts.

The Eagle Petroleum Co. No. 1 Haugen, C SE NW section 12-35n-3w, is pumping 50 bbls. per day from the Sunburst at 1,523-62 feet.

The New Era Fuel Co. No. 1 Goeddertz, CWL NE SW sec. 12-35n-3w, is a 3- or 4-bbl. well after plugging back from 1,813 feet and completing in the Sunburst at 1,545-55 feet.

The Adlon Oils, Ltd., No. 1 Ward, C NW SE section 29-35n-3w, reported a 35-bbl. well last week at 1,648 feet, is making better than 100 bbls. per day, flowing through the tubing after acidizing with 500 gallons.

Superior Pet. Co. No. 6 Govt., CSL SW NW sec. 12-35n-3w. Drlg. 630 ft. (first report).
Big West Oil Co. No. 5 McDonald, NE SE SW sec. 19-35n-2w. Drlg. 900 ft. (first report).
Burke & Kluth No. 1 Overby, NW NW NW sec. 30-34n-2w. Drlg. 140 ft. (first report).
Neil Spencer No. 1 Barkulo, C NW NW sec. 25-35n-4w. Spdg. 25 ft. (first report).
Consolidated Gas Co. No. 1 Hugi, NE NE NW sec. 14-35n-3w. Drlg. 200 ft. (first report).
A. E. Crumley No. 1 Govt., NW NE SW sec. 27-36n-3w. Drlg. 580 ft. (first report).
Hardrock Oil Co. No. 1 Govt., SE NW NW sec. 11-35n-3w. Drlg. 1,000 ft.
Texas Co. No. 11 Bruin, SE cor. sec. 9-35n-2w. Drlg. 960 ft.
Texas Co. No. 6 Swears, NW NE SW sec. 9-35n-2w. Cmtd. 7-in. 1,575 ft.
A. Beardslee No. 7 Swears, NE SW NW sec. 9-35n-2w. T.D. 1,650 ft.; contact 1,650 ft.; S.O.; will D.D.
Lamont Pet. Co. No. 3 Van Note, CNL NW NW sec. 30-35n-2w. Drlg. 140 ft.
Prevol & Shea No. 1 Porter, CSL NW NW sec. 12-34n-3w. T.D. 1,540 ft.; contact 1,527 ft.; S.O.; will acid.
Nepstad et al No. 2 Haugen, C NW NE sec. 11-35n-3w. T.D. 1,825 ft.; contact 1,824 ft.; will acid.
Big West Oil Co. No. 4 McDonald, CNL SE SW sec. 19-35n-2w. T.D. 1,545 ft.; contact 1,527 ft.; acdzg.
E. C. Carney No. 2 Stockman, CSL NW NE sec. 11-35n-2w. T.D. 1,634 ft.; contact 1,623 ft.; S.O.; will acid.
Security Oil Co. No. 1 Kopsing, CWL SW SE sec. 24-34n-2w. Loc. (first report).
Capitol Oil Co. No. 1 Pace, C SE SW sec. 27-36n-1w. Drlg. 2,006 ft.; Sunburst dry.
S. V. Day No. 3 Halter, NE NE NE sec. 17-35n-2w. Drlg. 1,050 ft.
Watson et al No. 2 Leach, SE NE NE sec. 31-35n-3w. S.D. 1,796 ft.
Browning-Sunburst 32 Synd. No. 1 Goeddertz, NE NW SW sec. 21-36n-3w. T.D. 1,780 ft.; U.R.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier mach. to resume.
Ogden-Kevin Oil Co. No. 7 Zachot, SE SW NW sec. 20-35n-1w. S.D. 900 ft.
Treasure State Oil Co. No. 4 Shaw, SW NE NE sec. 35-36n-2w. T.D. 1,571 ft.; shot with 80 qts.; 1,000 ft. oil in hole.

Outside Kevin-Sunburst

Model Oils, Inc., No. 1 Fey, NE SW sec. 5-37n-3e. T.D. 300 ft.; fshg.
T. P. Kyle No. 1 Kielbaugh, CWL SW SW sec. 2-37n-1w. Bow and Arrow dome. Drlg. 1,820 ft.

Yellowstone County

Western Dakota Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. Drlg. 650 ft.; S.O. 502 ft.
Broadview Dome Oil Co. No. 1, NE NE SW sec. 18-3n-23e. Drlg. 506 ft.

UTAH

Carbon County

Kelly Young No. 1, NE NE SE sec. 20-14s-10e. Drlg. 600 ft. in Dakota test (first report).

Daggett County

Mountain Fuel Supply Co. No. 1 Lauzier, CNL NW NW sec. 27-3n-24e. Drlg. 5,600 ft.; close to Sundance.

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft.; M.I. heavier rot. equip.

Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. S.D. 2,265 ft.; to erect standard drk.

Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. Drlg. 203 ft.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56e. T.D. 2,985 ft.; R.U.R. to D.D.

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. Drlg. 2,572 ft.

Keith County

Twentieth Century Oil Co. No. 1 Stuken, C NW NW sec. 21-14n-37w. S.D. 110 ft.; indef.

Lincoln County

Smith & Wright No. 1 Hansen, C SW NW sec. 24-15n-31w. S.D. 1,805 ft.

Jefferson County

L. R. Page et al No. 1 Bonham, C SE SE sec. 1-1n-1e. Spdg.

Kansas Fields

(Continued from Page 92)

depth. Glimac Oil Co. No. 1 Proud, section 33-30-1w, wildcat, was abandoned at 4,102 feet, total depth.

Cowley County

Tom Palmer and others No. 1 Ogroskey, SE SE NW section 31-32-5, Cowley County wildcat, was dry and abandoned at 3,161 feet, total depth.

Another large producer recently was completed in the Weathered pool at Lloyd, Frost & Study No. 3 Carson, section 33-31-3e, which made potential of 2,615 bbls. of oil at 3,264 feet, total depth.

McCoy and others No. 1 Anderson, SE NW NE section 34-34-6, wildcat, was dry and abandoned at 3,055 feet, total depth.

Pryor & Lockhart No. 1 Brown, NE SE SE section 34-33-3e, wildcat, was a location.

Chautauqua County

Ben Gralapp No. 1-A Miller, SW SE SW section 23-32-12, Chautauqua County, had Siliceous lime at 1,892 feet, total depth 1,915 feet, and was dry and abandoned.

Elk County

Republic Natural Gas Co. No. 1 Glasscock, SE NE SW section 19-31-11e, Elk County wildcat, had Kansas City lime at 1,110 feet, Mississippi lime 1,978 feet, Siliceous lime 2,260-69 feet, total depth, and was dry and abandoned.

Butler County

Empire Oil & Refining Co. No. 26 Lathrop, NE SE SW section 17-23-4e, Butler County, was bottomed at 2,082 feet, acidized and pumped 135 bbls. of oil and 52 bbls. of water in 24 hours.

Roth & Faurot No. 2 King, section 17-24-4, an old well, was deepened from 2,240 feet to 2,551 feet and abandoned.

National Refining Co. No. 1 Sutter F, section 13-28-6, was abandoned at 3,207 feet, total depth. Sinclair Prairie Oil Co. No. 1 Sutter, section 18-28-7, was abandoned at 2,723 feet, total depth. Westgate-Greenland Oil Co. No. 1 Doornboss, section 18-28-7, was abandoned at 2,754 feet, total depth.

Greenwood County

Recent completions in Greenwood County include Davisson No. 1 Evans, section 7-22-10, total depth 2,415 feet, swabbed 200 bbls. of oil in 24 hours; Phillips Petroleum Co. No. 7 Agard A, section 14-24-9, total depth 2,173 feet, pumped 12½ bbls. of oil daily; Ohio Oil Co. No. 1 Armstrong, section 16-24-10, dry and abandoned at 2,767 feet, total depth.

Seven-Eleven Oil Co. No. 1 Evans, SE NW NW section 7-22-10, was bottomed at 2,415 feet, acidized and swabbed 200 bbls. of oil daily.

Woodson County

Henderson Oil Co. No. 4 Vostrez, section 23-23-14, Woodson County, pumped 30 bbls. of oil daily and was completed at 1,618 feet, total depth. Nye & Kilby No. 2 Bowles, section 31-23-14, was abandoned at 1,766 feet, total depth. Oko Oil Co. No. 1 Hunsicker, section 14-24-13, total depth 1,670 feet, pumped 25 bbls. of oil daily.

Ellsworth County

Continental Oil Co. and Empire Oil & Refining Co. No. 10 Jensen B, section 34-17-8w, Ellsworth County, made potential of 607 bbls. of oil at 3,253 feet, total depth. Gulf Oil Corp. No. 7 Grizell, section 31-17-10w, was bottomed at 3,264 feet and made potential of 2,188 bbls. of oil.

Trego County

Watchorn Oil & Gas Co. and others No. 1 Wilson, section 22-11-23w, Trego County, made potential of 400 bbls. of oil at 3,488 feet, total depth.

Barber County

Barbara Oil Co. No. 1 Root, C W half NW section 14-33-13w, Barber County, produced 5,000,000 feet of gas daily and was completed at 4,973 feet, total depth.

Barbara Oil Co. No. 1 Holmes, C E half SW section 15-33-13w, an old well, old total depth 4,847 feet, was cleaning out.

Grant County

Columbian Fuel Co. No. 1 Johanson, C SW section 11-29-36w, Grant County, produced 15,000,000 feet of gas daily and was completed at 2,575 feet, total depth.

Columbian Fuel Co. No. 1 Smith, C SE section 35-28-36w, was rigging up rotary. Panhandle Eastern Pipe Line Co. No. 1 Taggert, C section 11-30-37w, Grant County wildcat, was rigging up rotary.

Pawnee County

Simpson Oil Co. and others No. 1 Hewson, SE SE SW section 13-21-17w, Pawnee County wildcat, had Kansas City lime at 3,528 feet and was dry and abandoned at 2,896 feet, total depth.

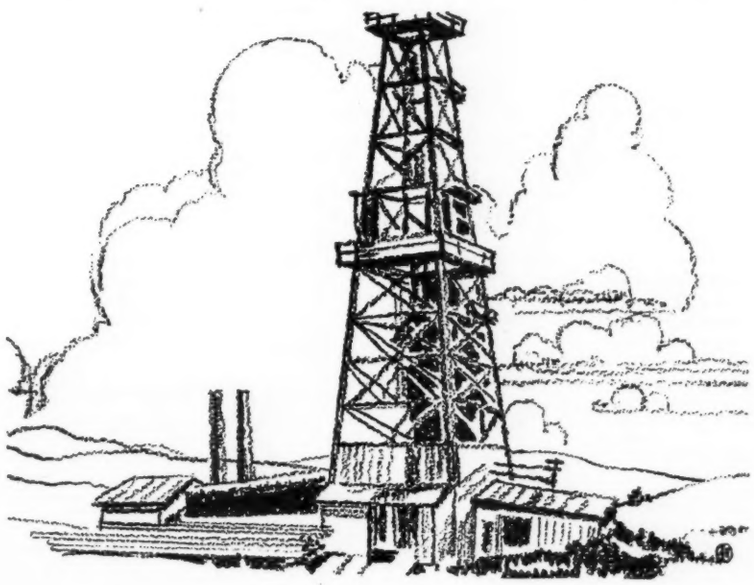
Other First Reports

Skelly Oil Co. and others No. 1 Adams, SE NW NE section 2-28-11w, wildcat in Pratt County, was a location.

In Ness County, Continental Oil Co. No. 1 Everett, C W half SW SW section 7-18-25w, was a location.

In Marion County, Hutchinson Oil & Gas Co. and others No. 1 Ehrmann, SE SE SW section 1518-1e, wildcat, was moving in material, and Western Kansas Oil & Refining Corp. No. 1-A Melcher, SW NW NW section 7-19-3e, was a location.

WE BANK ON OIL!



From the days of the first discovery of oil in the Southwest this Bank has been a vital force in the progress of the Industry; assuring the producer at all times, prompt and efficient action in all phases of Oil Financing.

DIRECTORS

B. F. BARNETT
Vice President
J. P. BYRD, JR.
Vice President
M. M. DOAN
Oil Investments
F. L. DUNN
Executive
Vice President
A. L. FARMER
Real Estate
H. N. GREIS
Oil Producer
JOHN D. MAYO
Mayo's, Incorporated
R. OTIS McCLINTOCK
President
F. B. PARRIOTT
Oil Producer
W. G. SKELLY
President, Skelly Oil Company
ELMO THOMPSON
Vice President

THE FIRST NATIONAL BANK AND TRUST COMPANY OF TULSA

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

1895 — We Bank on OIL — 1937

Texas and Louisiana Gulf

HARRIS COUNTY DISCOVERY RESULTS IN RECORD PRICES

By
F. L. SINGLETON

HOUSTON, Tex., July 12.—The opening of a new oil field in Harris County and the coring of oil sand in a wildcat at the Venice Salt dome in Plaquemines Parish, Coastal Louisiana, held the attention of operators along the Gulf Coast district.

Humble Oil & Refining Co. No. 1 J. J. Settegast, located about 3 miles northeast of Hastings field, Perry and Austin Survey, in southern Harris County, was washed in Sunday from a screen setting at 5,802 to 6,009 feet, a plugged-back depth, and on a 24-hour gauge through a quarter-inch choke it flowed 650 bbls. of 29-gravity oil with tubing pressure and casing pressure equalized at 850 pounds.

The core record of the well, released by the company, assures the opening of a new field and was reported as follows: Oil sand showing 5 per cent saturation at 5,811-20 feet; shale with no show at 5,820-21 feet; oil sand showing 5 per cent saturation at 5,821-5,970 feet; shale with no show at 5,970-78 feet; oil sand showing 7 per cent saturation at 5,978-6,009 feet; and shale with sand streaks showing oil at 6,009-6,040 feet.

A record price for acreage in the area was paid by Humble Oil & Refining Co. for 31 acres located approximately 6,000 feet northeast of the well. The deal involved the A. E. Kiesling tract which brought $5,000 per acre and the company agreed to start a well within approximately 90 days. Royalty deals are reported to have been made from $500 to $900 base.

At the Venice Salt dome, Plaquemines Parish, Tide Water Associated Oil Co. is running casing preparatory to testing No. 3 Manhattan Land & Fruit Co. after coring 21 feet of oil sand to a total depth of 7,208 feet. This is the third deep test drilled by the company. It is 460 feet east of No. 2 in section 26-21s-30e. No. 2 Manhattan was abandoned at 7,272 feet with showings of oil and gas reported at 6,429-36 feet.

Two and one-half miles southwest of the Seabreeze field, Chambers County, Sun Oil Co. No. 1 Jackson has attracted attention by oil and gas showing topped at 8,531 feet. The hole is bottomed at 8,570 feet, in sand with a slight oil and gas odor and is being reamed preparatory to running casing. Location is in the Yarbo Survey.

Important Wildcat Locations

There were two important wildcat locations made in Chambers County. Two miles northwest of the most northerly production in the Anahuac field and about 4 miles northeast of the town of Anahuac, David B. MacDaniel is rigging up for No. 1 S. E. Barrow, located from the most southerly south line of the Luke Bryan Survey. The area has been worked with geophysics, said to have uncovered a separate structure from the Anahuac field. In the John Jains Survey, George H. Anderson and others staked No. 1 J. H. Fisher 2,310 feet from the west line and 330 feet north of the south line of a 176.5-acre tract.

On the northeast side of the Silsbee field, Hardin County, Republic Production Co. and Houston Oil Co. No. 17 Brooks, one location west of production has apparently defined production, although the hole has been plugged back preparatory to sidetracking after testing salt water in the 6,800- and 6,900-foot pay. Drill stem tests were made at 6,805-15 feet and 6,912-32 feet. The latter test showed no oil or gas and 32 thribbles of salt water. Cement plug was set at 6,800-6,932 feet and 5,500-5,700 feet and the hole is being sidetracked. On the southeast side, Humble Oil & Refining Co. No. 1 Kirby, in the Ellery Survey, perforated casing at 6,851-53 feet and flowed 10 bbls. per hour through a quarter-inch choke with tubing pressure 400 pounds and casing pressure 550 pounds. It was drilled into salt water sand at a total depth of 6,989 feet.

Amelia Field

There were several wells scheduled to be completed in the West Beaumont area of the Amelia field, Jefferson County, Stanolind Oil & Gas Co. No. 3 McCormick topped sand showing oil at 5,377 feet and is bottomed at 5,400 feet with 7-inch casing at 5,367 feet. Same company's No. 4 Sargl was being completed at a plugged back depth of 6,103 feet while No. 5 Sargl flowed 520 bbls. per day through a quarter-inch choke at a total depth of 5,390 feet. Sun Oil Co. No. 1 Gailey in the Houston Survey is bottomed in sand at 5,428 feet with 7-inch casing cemented on bottom.

At the Lockridge field, Brazoria County, Gulf Oil Corp was making a drill stem test of No. 2-A Wood, a southeast extension test which is bottomed in oil sand at 6,368 feet. The Kirby Petroleum Co. is moving in material for No. 1 Carrie Baker, a west offset to Shell Petroleum Corp. No. 1-B Ramsey which is now being rigged up. Location is in the J. W. Hall Survey.

Hastings Extended

More acreage was thrown open for development in the Hastings field by Stanolind Oil & Gas Co. No. 1 H. Moore located approximately a mile south of production in the R. A. MaGee Survey which is being tested at 6,080 feet. The well is said to be checking normally with the wells in the field proper which no doubt means the future extension of the field farther south.

Five miles northwest of LaPorte in Harris County, Shell Petroleum Corp. has farmed out a portion of its acreage to the West Petroleum Co. which is rigging up No. 1 Ammon Underwood, in Block 561 of the Nicklos Clapper Survey. Several tests have been drilled in the immediate area and some encouraging showings have been encountered.

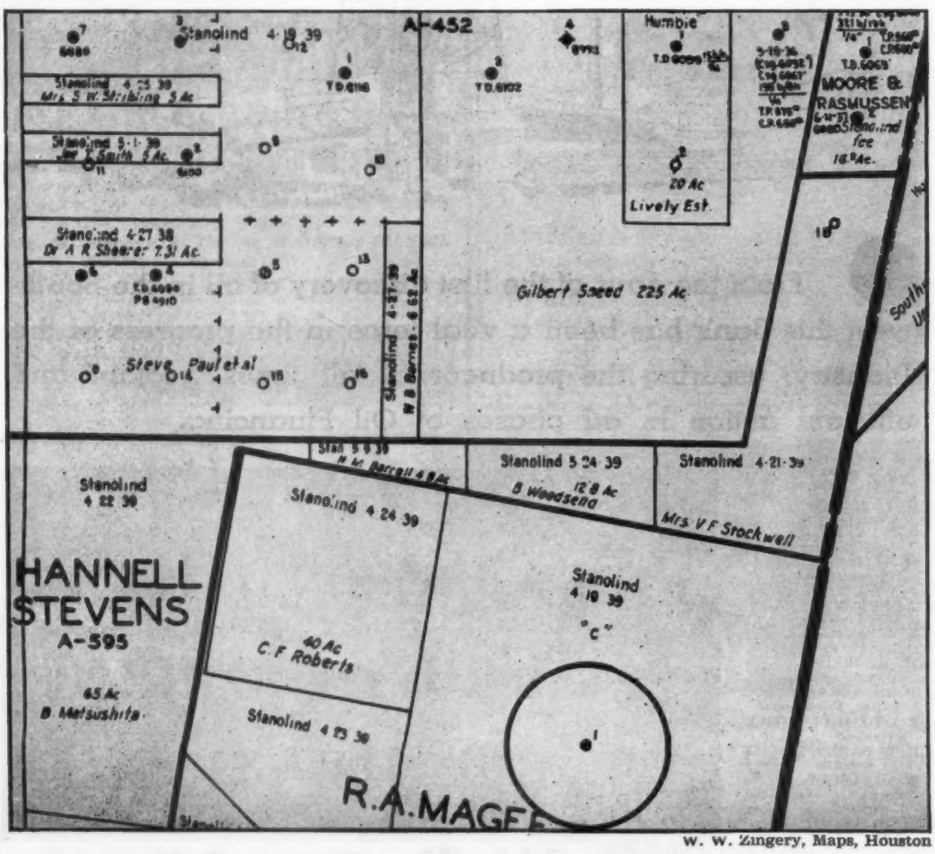
Another interesting location for the Old Danbury dome, Brazoria County, has been spudded. It is Rowan Drilling Co. No. 1 Jameson about a half mile northeast of the dome in the Henry Austin Survey and is scheduled to be drilled below 7,000 feet. Several deep tests have been drilled around this structure without success.

In the Hardin field, Liberty County, Jack Frazier and Woodley Petroleum Co. have spudded No. 1 John Roberts and No. 1 McMurtay in the immediate area of the recent extension producer, while to the northwest near the discovery well, L. W. Wickes has derrick up for No. 1 Lynott and Buffam, a north offset in the J. Robeson Survey.

Magnet Field

With the coring of approximately 50 feet of oil and gas sands at Humble Oil & Refining Co. No. 1 H. C. Cockburn, offsetting Atlantic Refining Co. No. 1-B Cockburn, has made the Magnet field, southern Wharton County, more attractive and is expected to result in much activity. Gas sand was topped at 5,500 feet and oil sand from 5,525-50 feet, the total depth. A Schlumberger survey was being made and casing is to be run.

In the LaBelle field, Jefferson County, Sun Oil Co. No. 1 John Ward, 933 feet southwest of the discovery



W. W. Zingery, Maps, Houston

Southern part of Hastings field, Brazoria County, and extension well of Stanolind Oil & Co. which opens considerable productive acreage

well in the William Burton Survey has reached a depth of 9,951 feet and a protection string of 7-inch casing has been cemented at 9,951 feet. The discovery well is producing from the Lower Frio sand through perforated casing at 8,211-16 feet.

Louisiana Coast

Along the Louisiana Coast, attention continued to be centered on the wildcat test of Louisiana Crusader Oil Co. No. 1 Langley on the Fenton Prospect, Jefferson Davis Parish, although it has shown salt water on two previous tests. These tests were made through perforations at 8,957-65 feet and at 7,358-64 feet and showed salt water along with some gas pressure. The hole has been plugged back and perforations were to be made at 6,550-75 feet. The well is located in section 36-7s-5w and the hole may be deepened should the above test fail.

On the China Prospect in Jefferson Davis Parish, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2-B Calcasieu National Bank cored from 8,945-50 feet and recovered 5 feet of sand showing gas and is coring ahead in sand rock below 8,955 feet. The well is west of the company's No. 1 Calcasieu National Bank, abandoned several months ago after it blew out from a total depth of 9,139 feet. Sand showing gas was topped in this test at 8,965 feet which is just a few feet higher than the second test. The prospect is located in section 28-7s-3w.

Lafitte Extended

The Lafitte field, Jefferson Parish, was extended several hundred feet by the completion of another 10,000-foot oil producer by Texas Co. No. 7 Rigolets in section 29-17s-24e. The hole was drilled to a depth of 10,406 feet and was scheduled to be completed at 10,210-40 feet, but mechanical trouble developed and the well was completed through perforated casing at 9,982-10,006 feet for an initial production of 1,450 bbls. per day through a three-eighths inch choke.

At North Crowley, Acadia Parish, Humble Oil & Refining Co. No. 1 Federal Land Bank, a prospective pool opener continues drilling below 8,353 feet after a drill stem test at 8,228-53 feet showed 75 pounds working pressure and 25 thribbles of salt water. The well has shown several hundred feet of pipe line oil on a drill stem test at 8,086-8,105 feet and is being drilled deeper in search of a deeper sand.

Jennings Activity

With the announcement of four locations, drilling activity on the southwest flank of the old Jennings field in Acadia Parish continues to increase. Locations were made by Cosmo Petroleum Co. for No. 1 M. E. Crusel in section 42-9s-2w, Glassell & Glassell No. 2 R. McFarlain in section 41 and No. 3 McFarlain in the same section; Louisiana Crusader Oil Co. No. 1 Heywood-Martin in section 42 and Reiter-Foster Oil Co. No. 1 M. C. Crusel and others located in section 42. The latter test will be drilled in search of the 3,900-foot sand. This area received its fifteenth producer the past week by Superior Oil Co., No. 4 William Leckelt which flowed 500 bbls. per day through a 13/64-inch choke. Screen was set from 6,730-6,915 feet. The same company was preparing to test No. 2 Iowa-Jennings at 6,500-40 feet while No. 1 A. P. Moresi will be completed from 6,550-6,714 feet.

California Fields

(Continued from Page 100)

It is scheduled for completion in the Wagonwheel zone of Eocene age. Continental Oil Co. No. 9 Result should also be an early completion. In the Greeley field Standard Oil Co. completed No. 12-1 in section 30-29-26 flowing 75 bbls. of 33.1-gravity oil and 220,000 feet of natural gas per day from 7,886 feet after the hole had been plugged back from 8,496 feet. The hole was finished with 150 feet of 6⅝-inch liner including 105 feet of perforated. It is flowing through a 1-inch bean under a casing pressure of 350 pounds and may build up within another few days, provided a present water problem is overcome or removed naturally. Standard's next completion in this field should be No. 11-4 in section 20-29-26 as it is in the pay at 7,691 feet with a 9-inch water string landed at 7,635 feet. In the Mountain View field of Kern County Tracy Drilling Co. completed No. 1 Blackburn in section 19-30-29, pumping 110 bbls. or 24.5-gravity oil per day from 5,165 feet.

Los Angeles Basin

In the Huntington Beach field of Los Angeles Basin, Standard Oil Co. completed No. 14 Thomson, pumping 204 bbls. of 23.6-gravity oil and 14 bbls. of water per day from 3,820 feet. In the Rosecrans field Bolsa Chica Oil Co. is rotating ahead in oil sand in No. 1 Exeter at 7,530 feet but still has some distance to go before drilling is concluded. Universal Consolidated Oil Co. which took over the Trust lease after Republic Petroleum Co. quitclaimed it has its No. 1 Trust down 7,326 feet. In the recently discovered O'Dea zone Union Oil Co. is expected to complete the next well, No. 16 Rosecrans, where swabbing operations have just been started with bottom of the hole at 7,560 feet. In the El Segundo field Republic Petroleum Co. is deepening No. 8 El Segundo following failure of the well to show substantial production. The hole is down 7,562 feet in Schist. The company will continue drilling in order to determine whether this is the main body of Schist, or an intrusion, in which event there might be a possibility of encountering some additional oil sand. The uppermost part of the Schist body in this field is rather badly shattered and thus contains some oil.

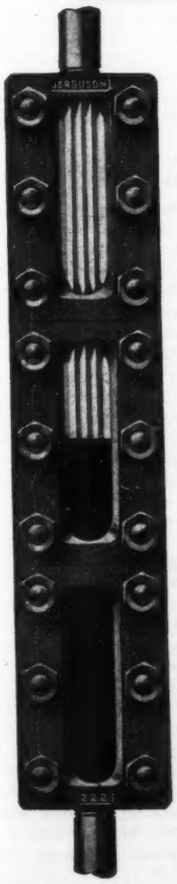
Michigan Fields

(Continued from Page 86)

The St. Clair County test is being put down in SW SW SE section 31, Port Huron Township, by the J. B. G. Co. on the Anna Baldwin lease. The Mackinac County test is on the Hiawatha Club lease, SW SW NE section 5, Garfield Township, which is to be drilled by Charles VanKeuren who made an attempt on the same property last summer, reported a show of oil, then plugged and abandoned the hole.

Burr Oil Co. will drill a wildcat on the George Smith farm, SE SE SW section 36, Elmer Township, Oscoda County. The fourth of the exploratory holes will be in Hay Township, Gladwin County, not far from the prolific Buckeye field, on the Robert Bushop property in SW SE NE section 16.

JERGUSON



REFLEX GAGES

are ideal for gasoline, kerosene, steam, oil. No matter what the color of the liquid, they show the level in BLACK.

The *empty* space appears WHITE

The *Liquid* shows BLACK

Safe and durable at highest pressures and temperatures. Furnished with or without valves for every type of service. Write us.

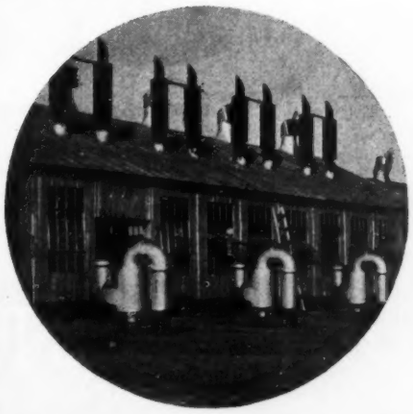
JERGUSON GAGE & VALVE CO.
Mystic Ave. & Northern Artery
SOMERVILLE, MASS.

VORTOX
FIRST IN TEXAS

Vortox Triple Action Air Cleaners lead the parade in Texas, too, just as Texas leads the nation in oil production. You'll find Vortox cleaners on all kinds of engines, from the largest compressor and refinery installations to the smallest tractors.

And in every Vortox Cleaner there is the PLUS value of efficient intake silencing at no extra cost.

Specify Vortox and get the Standard!



VORTOX MFG. CO., CLAREMONT, CALIF.

VORTOX
OIL TYPE SELF-WASHING
AIR CLEANER

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, July 10.—Crude production from all Alberta fields in May totaled 175,997 bbls., compared with 172,603 bbls. in April. Turner Valley limestone production increased from 169,218 to 172,907 bbls. and Turner Valley light crude declined from 932 to 765 bbls. Red Coulee light crude was up from 1,195 to 1,211 bbls. and Wainright heavy crude down from 1,263 to 1,114 bbls. As a result of acidizing operations in Turner Valley, the June figures will show a considerable increase.

Turner Valley Acidizing

On the west flank of South Turner Valley, Foundation Royalties No. 1, LSD 5, section 21-18-2w5, bottoming in the lime at 6,456 feet with around 225 bbls. a day crude production was treated with 6,000 gallons of acid. It blew crude over the derrick, indicating a flush production around 150 bbls. an hour later settling to about 600 bbls. a day. The gas flow increased from 800,000 to 4,500,000 feet.

West Side Royalties No. 1, LSD 3, same section, bottoming in the lime at 6,379 feet with flow about 400 bbls. a day after a first acid treatment, was given 3,000 gallons additional. The gas flow increased from 7,500,000 to around 10,000,000 feet, with some increase in crude production.

Advance Oil Co. No. 5-A, LSD 16, section 10-19-2w5, completed in 1930 with production from the lime at 6,515 feet is testing production after acidizing. This well in the West Central area near the crude oil line started as a naphtha producer, later changing to light crude with a settled production recently of 40 bbls. a day. It was taken over some years ago by the Royalite Oil Co. This is the first acid treatment attempted in the West Central area.

Of the wells previously treated Royalite Oil Co. No. 4 Sterling Pacific, LSD 4, section 33-18-2w5, originally around 1,000 bbls. is making about 1,950 bbls. a day. No. 3 Sterling Pacific, with settled natural production of 85 bbls., is holding steady at 270 bbls. Turner Valley Royalties No. 1, LSD 13, section 28-18-2w5, which previously was down to 585 bbls. after a year's production, is making about 1,600 bbls. Century Royalties No. 1, LSD 14, section 28-18-2w5 is testing production after acid treatment. The previous settled production was around 125 bbls. a day. British Dominion Oil & Development Corp. No. 4, LSD 6, same section, with settled production of 88 bbls., will be acidized.

West Central Field

In West Central Turner Valley, Brown Oil Corp. No. 3, LSD 15, section 19-19-2w5, is below 747 feet. North American Petroleum No. 1, LSD 10, section 5-19-2w5 is being completed by Vulcan-Brown Petroleums, Ltd., and is deepening below 560 feet. Location is on Calgary & Edmonton Corp. acreage.

In section 5-19-2w5, Mercury Royalties No. 1, LSD 8, is below 4,432 feet. Mercury Oils No. 8, LSD 3, section 4-19-2w5, is below 4,320 feet. Miracle Oils No. 2, LSD 16, section 5-19-2w5, is preparing to acidize.

Tests in the Lime

In section 20-18-2w5, Monarch Royalties No. 1, LSD 9 has resumed after cementing in the top of the lime at around 6,552 feet. It got the Madison about 6,525 feet, and is expected to get production this month. Location is west of the crude oil production line and about a quarter mile northwest of Foundation Royalties No. 1 producer.

In section 33-18-2w5, Royalite Oil Co. No. 5 Sterling Pacific, LSD 12, is below 6,526 feet and expected to get the lime within 6,600 feet.

West Side Drilling

Royalite Oil Co. No. 6 Sterling Pacific, LSD 5, same section, is below 673 feet after cementing surface casing at 323 feet.

In section 32-18-2w5, West Turner Petroleum's No. 1, LSD 2, is rigged waiting for boilers. West Flank No. 2, LSD 1-8, is spudding. West Flank No. 3, LSD 8, is rigging.

West of the main drilling area, Okalta Oils No. 6, LSD 3, section 30-18-2w5 is rigging, to spud.

In section 20-18-2w5, Spy Hill Royalties No. 1, LSD 16, has derrick up, waiting for equipment. Royal Canadian Oils No. 1, LSD 15, will be completed by Royalite Oil Co. which is rigging rotary equipment to deepen from 505 feet.

United Oils, Ltd., of Calgary will drill its No. 1 test in LSD 1, section 20-18-2w5, if Monarch Royalties No. 1, now in the limestone, gets production. Location is more than a half mile due south of the Monarch well which got the lime below 6,500 feet.

New Valley Deep Test

On the New Valley structure, northeast of Turner Valley, McLeod Oil Co. No. 1, LSD 4, section 6-21-2w5, is below 8,000 feet with continued small shows of oil and gas. It is the deepest well drilled with cable tools in the British Empire.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5 is in a black shale horizon of the Fernies below 8,021 feet, after getting a considerable gas show at 8,000 feet.

On the Duncan structure west of Calgary, Spindletop Oils No. 1, LSD 4, section 1-30-6w5 is preparing to resume after running 18⅝-inch casing to 390 feet.

In the Pincher Creek area, Weymarn Petroleum's No. 2, LSD 5, section 7-6-1w5 is bailing with about 400 feet of rotary mud and oil at the bottom of the 5,960-foot hole. Difficulty is being experienced in clearing the mud as the 48 gravity crude continues to rise above it. It is believed the mud which hardened while the well was standing idle sealed off some of the sands. The well is being shut in to build up gas pressure, and if this fails to clear the hole it will be acidized.

Home Oil Operations

In addition to its No. 1 test in North Turner Valley, Home Oil Co. of Vancouver is conducting an aerial and geological survey of the Pouce Coupe district in the northern foothills, where the company holds a prospecting permit on 107,000 acres southwest of Grande Prairie and bordering on the British Columbia boundary. A test will be drilled when the geological work is completed.

Work will be started early in August on a test on the Brazeau structure in the foothills west of Edmonton. Standard tools will be used. A rotary test will be started this summer on Southern Alberta between the Red Coulee and Del Bonita structures.

Border Fields

West of Lethbridge, in the border area of Southern Alberta, Lethbridge Petroleum & Refining No. 1, LSD 12, section 11-8-22w4, is in the Milk River sandstone at 940 feet and preparing to resume after running 16-inch casing.

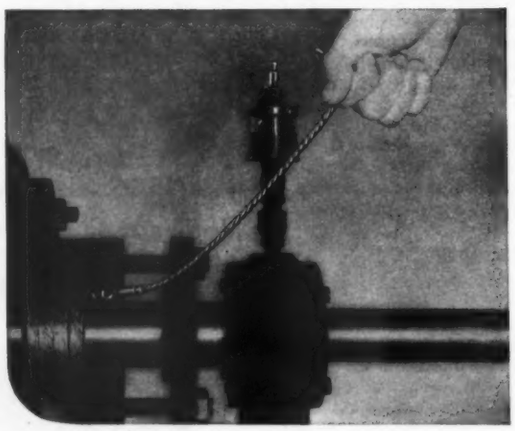
In the Taber field, Plains Petroleum No. 2 LSD 11, section 25-9-17w4 is below 1,909 feet. Casing was cemented in the Milk River formation at 860 feet to shut off water. After setting casing in the Bow Island sand, the hole will be completed to Clancey sand, where production was encountered in No. 1. Plains No. 3, section 26-9-17w4 has derrick up and is installing machinery. Plains No. 1, LSD 14, section 20-9-17w4 is lowering 4½-inch casing to bottom and cementing to shut off water. North Taber Exploration Co. which holds 10,300 acres in Townships 10 and 11, Range 15w4 is arranging for survey of its acreage preliminary to a commercial test.

In the Steveville district, Anaconda Oil Co. No. 1, LSD 15, section 9-22-12w4 is in quicksand formation below 125 feet and carrying 24-inch pipe.

Adjoining the Taber field, Lethalta Oil's No. 1, LSD 5, section 33-8-18w4 is preparing to resume after standing idle for several years. The hole bottoms at 2,300 feet, with 14-inch casing set at 1,000 feet.

DURA HOOK

A Sturdy ALL STEEL PACKING REMOVER



A Better Way To Remove Packings

SIZES
Made in six lengths: 7½", 11", 15", 19", 22", 30". Also furnished in handy sets of 3, 4 & 5 hooks.

A new and handy tool that you should have on the job right now! Puts an end to time-wasting, make-shift methods of removing packings. Built for severe service . . . patented tool steel flexible cable . . . corkscrew bits of tempered tool steel . . . low in cost. Write today for prices and further information.

Made by the manufacturers of DURAMETALLIC Packings—the reliable packing for all mechanical and chemical requirements.

DURAMETALLIC
KALAMAZOO Corporation MICHIGAN

C. M. HEETER, SONS & CO., INC.
MAIN OFFICE AND WORKS, BUTLER, PA.

"Heeter's" Packers and Swabs

Heeter's Improved Patent Swabs, Corrugated Friction Sockets, Wire Line Pumping Outfits, Sand Pumps and other Gas and Oil Well Materials.

Summary of Operations, All Fields for June

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Penna. Grade fields	516	927	32	64
Lima	7	62	3	1
Central Ohio	94	576	24	41
Indiana	10	35	6	0
Illinois	8	290	5	0
Kentucky	103	2,572	18	27
Michigan	86	54,546	11	3
Mississippi	1	0	1	0
Kansas	246	158,096	68	10
Oklahoma	266	93,374	70	12
North Cent. Texas	265	27,531	123	0
West Texas	247	186,426	19	0
Texas Panhandle	67	29,933	0	9
East Texas	181	7,842	3	0
East Central Texas	69	14,823	10	1
E. Texas border counties	31	9,503	3	3
Gulf Coast, Texas	167	67,888	23	11
Southwest Texas	242	19,035	77	9
Gulf Coast, La.	43	12,309	20	1
North Louisiana	66	19,358	8	11
Arkansas	15	3,561	10	0
Montana	26	2,461	7	5
Wyoming	6	2,807	7	0
New Mexico	74	65,760	7	0
Utah	1	0	1	0
Total June	2,837	779,715	556	208
Total May	2,720	694,283	453	191
Difference	113	85,432	103	17

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Penna. Grade fields	99	451	550
Lima	0	32	32
Central Ohio	46	169	215
Indiana	0	27	27
Kentucky	0	97	97
Illinois	11	45	56
Michigan	33	179	212
Florida	2	4	6
Alabama	1	2	3
Mississippi	6	12	18
Kansas	62	402	464
Oklahoma	64	454	518
North Cent. Texas	42	237	279
West Texas	119	471	590
Texas Panhandle	51	191	242
East Texas	75	106	181
East Central Texas	18	90	108
E. Texas border counties	2	43	45
Gulf Coast, Texas	41	129	170
Southwest Texas	82	208	290
Gulf Coast, Louisiana	19	91	110
North Louisiana	37	121	158
Arkansas	18	44	62
Montana	5	66	71
Wyoming	10	70	80
Colorado	4	42	46
New Mexico	11	153	164
Utah	0	9	9
Nebraska	0	7	7
Total June	858	3,952	4,810
Total May	940	3,916	4,856
Difference	82	36	46

OKLAHOMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Atoka	1	0	1	0	0	0
Alfalfa	0	0	0	0	1	1
Beckham	2	0	2	0	1	1
Caddo	0	0	0	1	5	6
Carter	14	225	4	2	17	19
Cleveland	2	2,104	0	0	10	10
Coal	0	0	0	0	3	3
Comanche	1	0	1	1	6	7
Cotton	3	17	1	0	5	5
Creek	18	489	4	6	46	52
Garfield	0	0	0	0	1	1
Garvin	7	656	1	2	9	11
Grady	0	0	0	0	4	4
Grant	0	0	0	0	3	3
Greer	1	0	1	0	0	0
Harmon	1	0	1	0	0	0
Haskell	0	0	0	0	1	1
Hughes	13	1,269	4	2	18	20
Jackson	1	10	0	0	3	3
Jefferson	3	0	3	0	7	7
Johnston	0	0	0	0	1	1
Kay	1	268	0	0	6	6
Kiowa	2	7	1	0	2	2
Latimer	0	0	0	0	1	1
Lincoln	6	1,263	0	0	11	11
Logan	10	5,923	4	1	5	6
Love	0	0	0	0	2	2
Marshall	2	10	0	1	1	2
McCurtain	0	0	0	0	1	1
Murray	1	0	1	0	2	2
Muskogee	3	108	2	2	9	11
Noble	13	7,035	2	4	11	15
Okfuskee	13	925	0	2	9	11
Oklahoma	15	30,131	0	2	16	18
Okmulgee	2	5	1	7	34	41
Osage	21	1,422	6	7	34	41
Pawnee	0	0	0	0	1	1
Payne	5	223	4	0	0	0
Pontotoc	51	37,414	4	12	77	89
Pottawatomie	7	927	2	1	14	15
Pushmataha	0	0	0	0	1	1
Seminole	17	2,429	6	9	48	57
Stephens	10	91	6	0	11	11
Texas	3	0	0	0	0	0
Tillman	3	0	3	0	2	2
Tulsa	14	423	5	1	9	10
Wagoner	0	0	0	1	5	6
Washita	0	0	0	0	1	1
Total June	266	93,374	70	64	454	518
Total May	267	62,007	62	62	450	512
Difference	1	31,367	8	2	4	6

Gas wells: Creek 2, Logan 1, Texas 3, Tulsa 3, Noble 1.

KANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Barber	1	864	0	1	4	5
Barton	22	19,454	6	6	33	39
Butler	8	1,016	3	3	12	15
Chase	1	0	1	0	0	0
Chautauqua	9	84	4	2	15	17
Coffey	1	0	1	0	2	2
Cowley	12	4,037	5	2	14	16
Decatur	0	0	0	0	1	1
Edwards	1	0	1	0	0	0
Elk	2	85	0	0	7	7
Ellis	26	40,614	5	7	32	39
Ellsworth	8	6,388	2	1	10	11
Grant	0	0	0	0	4	4
Greenwood	10	366	4	2	10	12
Hamilton	0	0	0	0	1	1
Harvey	3	81	2	2	5	7
Harper	1	0	1	0	1	1
Haskell	0	0	0	0	1	1
Kearny	0	0	0	0	1	1
Logan	1	0	1	0	0	0
Lyon	1	0	1	0	1	1
Marion	0	0	0	1	1	2
McPherson	7	1,837	2	2	13	15
Meade	0	0	0	1	0	1
Mitchell	0	0	0	0	1	1
Morton	1	0	0	0	0	0
Ness	0	0	0	0	2	2
Osborne	0	0	0	0	1	1
Pawnee	0	0	0	0	1	1
Pratt	0	0	0	0	1	1
Reno	20	9,197	2	2	28	30
Rice	49	32,142	14	9	66	75
Rooks	1	0	1	1	10	11
Rush	0	0	0	3	10	13
Russell	34	32,591	3	10	67	77
Scott	1	0	1	1	1	2
Sedgwick	1	0	1	1	7	8
Seward	0	0	0	0	1	1
Stafford	5	4,793	2	2	11	13
Stevens	3	0	0	0	3	3
Sumner	10	4,386	3	3	13	16
Trego	1	0	1	0	5	5
Woodson	6	161	1	0	6	6
Ttl. June	246	158,096	68	62	402	464
Ttl. May	199	143,949	43	78	390	468
Difference	47	14,147	25	16	12	4

May gas well completions: Barton 1, Chautauqua 3, Cowley 1, Morton 1, Stevens 3, Reno 1.

SOUTHWEST TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Agua Dulce	2	30	1	0	3	3
Alta Mesa	1	0	0	1	1	2
Alta Verde	0	0	0	3	0	3
Armagosa	0	0	0	0	1	1
Barbacoas	0	0	0	0	1	1
Bentonville	1	0	1	1	1	2
Bruni	8	600	2	1	3	4
Buchanan	2	115	0	2	2	4
Byersville	2	0	2	0	1	1
Calliham	2	35	1	0	1	1
Chapman Abbott	1	0	1	0	0	0
Chapman Ranch	1	0	1	0	1	1
Charamousca	1	65	0	0	1	1
Clara Driscoll	1	130	0	1	0	1
Colmena	4	0	2	0	2	2
Crowther	1	0	1	0	0	0
Cuevitas	1	360	0	0	0	0
Dale	1	0	1	0	0	0
Darst Creek Ex.	6	400	0	2	4	6
Driscoll	1	180	0	0	0	0
Dunlap	1	0	1	3	0	3
El Tanque	2	55	0	1	1	2
Escobas	16	420	3	1	3	4
Ezell	2	250	0	2	0	2
Flour Bluff	6	990	0	0	6	6
Govt. Wells	2	165	0	0	3	3
Henne-Winch-Fariss	1	0	1	0	0	0
Hoffman	5	160	1	0	0	0
Hords Creek	0	0	0	0	1	1
Jacob	0	0	0	1	1	2
Killam	5	515	0	1	2	3
Kingsville	1	0	1	1	1	2
Kohler	1	0	1	0	0	0
Labbe	4	500	0	1	1	2
La Blanca	0	0	0	0	2	2
Larremore	0	0	0	1	0	1
La Sal Vieja	0	0	0	0	1	1
Loma Alta	0	0	0	0	1	1
Loma Novia	5	500	1	2	3	5
Loma Vista	1	0	1	0	0	0
London	1	0	1	0	0	0
Lopena	1	0	1	0	0	0
Lopez	4	250	0	2	0	2
Los Olmos	2	0	2	0	2	2
Luby	0	0	0	0	1	1
Luling-Branyon	20	2,060	0	6	13	19
Manford	1	20	0	1	0	1
McCampbell	5	1,150	0	2	7	9
Midway	1	160	0	0	0	0
Nolte	0	0	0	0	1	1
N. Dale	1	25	0	0	1	1
N. Jacob	1	0	1	0	0	0
N. Pettus	1	70	0	0	0	0
N. Sweden	5	935	0	3	11	14
Oakville	0	0	0	0	1	1
O'Hern	6	1,750	1	0	5	5
Palangana	0	0	0	1	1	2
Pearsall	0	0	0	2	1	3
Piedra Lumbre	1	0	1	0	1	1
Plummer	2	275	0	0	2	2
Plymouth	4	670	0	2	0	2
Randado	0	0	0	0	1	1
Ricaby	1	0	1	0	2	2
Salt Flats	0	0	0	1	2	3
Samfordyce	2	25	1	0	2	2
Sandia	1	60	0	0	0	0
Sarnosa	2	40	1	0	0	0
Saxet	34	5,090	2	3	35	38
Saxet Heights	1	0	1	3	3	6
Seven Sisters	5	470	2	0	3	3
Slick	0	0	0	0	1	1
So. Calliham	0	0	0	0	1	1
Stratton	0	0	0	1	0	1
Sullivan	0	0	0	0	1	1
Sweden	1	40	0	0	2	2
Taft	3	220	0	1	0	1
Taylor	0	0	0	0	1	1
Thomas-Lockhart	1	0	1	0	1	1
Von Ormy	2	5	1	0	1	1
W. Premont	4	140	0	0	4	4
W. Tuleta	1	30	0	0	1	1
White Point	0	0	0	0	1	1
Yost	0	0	0	1	0	1
Zoboroski	2	80	0	1	2	3
Miscellaneous	38	0	37	27	49	76
Total June	242	19,035	77	82	203	290
Total May	322	35,195	85	77	203	280
Difference	80	16,160	8	5	5	10

Gas wells completed—Alta Mesa 1, Bruni 1, Colmena 2, Labbe 2, Saxet 1, West Premont 1, Miscellaneous 1, Total 9.

CENTRAL AND NORTH TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Archer	35	241	25	1	9	10
Baylor	2	35	1	0	0	0
Brown	3	21	2	0	4	4
Callahan	4	30	3	3	4	7
Clay	5	2,565	3	0	6	6
Coleman	0	0	0	0	3	3
Collin	0	0	0	0	1	1
Comanche	0	0	0	0	1	1
Cooke	21	857	10	1	12	13
Denton	1	50	0	1	7	8
Eastland	3	7	2	0	3	3
Foard	0	0	0	0	2	2
Grayson	0	0	0	2	4	6
Hardeman	0	0	0	0	1	1
Haskell	0	0	0	1	1	2
Jack	48	7,763	11	8	48	56
Knox	0	0	0	0	1	1
McCulloch	0	0	0	0	1	1
Montague	21	1,172	6	1	11	12
Palo Pinto	0	0	0	0	4	4
Shackelford	24	855	9	0	20	20
Stephens	1	0	1	2	6	8
Tarrant	0	0	0	0	1	1
Throck-morton	0	0	0	0	1	1
Wichita	39	4,285	20	3	21	24
Wilbarger	14	7,815	8	7	19	26
Wise	0	0	0	0	1	1
Young	44	1,835	22	12	45	57
Total June	265	27,531	123	42	237	279
Total May	212	12,692	88	61	256	317
Difference	53	14,839	35	19	19	38

Gas wells—none.

WEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Andrews	5	1,953	0	4	12	16
Bailey	0	0	0	1	1	2
Brewster	0	0	0	0	3	3
Cochran	1	0	1	2	1	3
Coke	0	0	0	0	2	2
Crane	7	5,098	1	4	29	33
Crockett	0	0	0	1	4	5
Dawson	1	0	1	0	2	2
Ector	50	46,855	1	23	103	126
Edwards	0	0	0	0	2	2
El Paso	0	0	0	0	1	1
Fisher	2	110	0	1	5	6
Gaines	0	0	0	1	11	12
Garza	0	0	0	0	2	2
Glasscock	5	3,697	0	1	5	6
Hockley	0	0	0	0	2	2
Howard	4	2,939	0	12	26	38
Hudspeth	0	0	0	0	1	1
Jeff Davis	0	0	0	0	1	1
Jones	18	6,495	5	7	28	35
Kimble	0	0	0	0	1	1
Loving	0	0	0	4	4	8
Menard	0	0	0	0	1	1
Mitchell	0	0	0	0	2	2
Pecos	9	5,676	3	6	40	46
Presidio	0	0	0	0	2	2
Reagan	0	0	0	1	1	2
Reeves	0	0	0	0	1	1
Runnels	0	0	0	1	3	4
Schleicher	0	0	0	0	2	2
Scurry	0	0	0	0	3	3
Stonewall	0	0	0	0	2	2
Taylor	2	0	2	0	0	0
Terry	0	0	0	1	2	3
Upton	30	12,738	4	22	39	61
Ward	54	48,491	0	11	59	70
Winkler	59	52,374	1	14	64	78
Yoakum	0	0	0	1	4	5
Total June	247	186,426	19	119	471	590
Total May	246	190,627	18	138	468	606
Difference	1	4,201	1	19	3	14

Gas wells—none.

EAST AND EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Anderson	10	243	1	4	12	16
Angelina	2	12	1	0	3	3
Bowie	2	0	2	0	3	3
Cherokee	1	0	1	0	1	1
Ellis	0	0	0	0	1	1
Fannin	1	0	1	0	2	2
Franklin	6	1,761	1	1	2	3
Freestone	1	0	1	0	3	3
Gregg	80	3,182	1	42	56	98
Henderson	8	1,268	0	5	7	12
Hill	0	0	0	0	1	1
Hopkins	7	3,452	1	2	5	7
Houston	0	0	0	0	2	2
Hunt	0	0	0	0	2	2
Kaufman	0	0	0	0	1	1
Lamar	0	0	0	2	1	3
Limestone	1	0	1	0	1	1
Red River	0	0	0	0	2	2
Rusk	66	3,388	1	20	35	55
Smith	8	253	0	6	2	8
Titus	31	8,087	1	3	36	39
Upshur	26	1,019	0	7	12	19
Van Zandt	0	0	0	1	5	6
Wood	0	0	0	0	1	1
Total June	250	22,665	13	93	196	289
Total May	236	21,582	18	92	198	290
Difference	14	1,083	5	1	2	1

Gas wells: Anderson 1.

TEXAS PANHANDLE

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Briscoe	0	0	0	0	1	1
Carson	8	4,265	0	2	20	22
Childress	0	0	0	1	0	1
Collingsworth	0	0	0	0	2	2
Cottle	0	0	0	1	0	1
Dallam	0	0	0	0	1	1
Deaf Smith	0	0	0	0	1	1
Gray	25	13,091	0	19	56	75
Hutchinson	25	12,537	0	20	72	92
Moore	6	0	0	8	28	36
Ochiltree	0	0	0	0	1	1
Potter	1	0	0	0	0	0
Roberts	0	0	0	0	1	1
Wheeler	2	40	0	0	8	8
Total June	67	29,933	0	51	191	242
Total May	49	16,254	0	68	192	260
Difference	18	13,679	0	17	1	18

Gas wells: Carson 1, Gray 1, Moore 6, Potter 1; total 9.

EAST TEXAS (Border Counties)

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bowie	1	0	1	0	3	3
Cass (Rodessa)	22	9,389	0	1	18	19
Harrison	4	102	0	0	3	3
Marion	1	0	1	1	13	14
Panola	2	12	1	0	4	4
Shelby	1	0	0	0	2	2
Total June	31	9,503	3	2	43	45
Total May	27	7,550	4	5	57	62
Difference	4	1,953	1	3	14	17

Gas wells and production: Cass County, 2 wells, 61,000,000 feet; Shelby, 1 well, 5,000,000 feet. Total, 3 wells, 66,000,000 feet.

TEXAS GULF COAST

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Amelia	23	12,374	1	5	13	18
Anahuac	10	4,859	1	1	4	5
Bammel	0	0	0	0	1	1
Bay City	1	250	0	1	0	1
Barbers Hill	1	192	0	1	1	2
Batson	0	0	0	0	1	1
Big Hill	0	0	0	0	4	4
Big Creek	0	0	0	0	2	2
Boling	1	290	0	0	0	0
Buckeye	1	120	0	1	0	1
Clay Creek	0	0	0	0	2	2
Cheek	1	392	0	0	0	0
Cleveland	0	0	0	0	1	1
Clinton	1	0	1	0	0	0
Cotton Lake	1	436	0	0	1	1
Dickinson	8	3,382	1	3	4	7
Esperson	1	191	0	0	1	1
Fairbanks	1	27	0	1	0	1
Fannett	0	0	0	0	1	1
Five Corners	0	0	0	0	1	1
Ganado	1	9	0	0	0	0
Greta	1	750	0	0	0	0
Goose Creek	1	0	1	1	0	1
Hardin	1	624	0	2	0	2
Hankamer	0	0	0	0	1	1
Hastings	25	13,785	1	0	14	18
Hawkinsville	0	0	0	0	1	1
Heyser	7	1,446	0	0	4	4
High Island	1	332	0	0	3	3
Hull	3	1,418	0	3	3	6
Humble	1	380	0	0	1	1
Keeran	2	240	1	0	1	1
Labelle	0	0	0	0	1	1
Lockridge	2	838	0	2	2	4
Livingston	1	0	0	0	0	0
Magnet	1	158	0	1	2	3
Manvel	4	1,324	1	0	2	2
Louise	1	0	1	0	1	1
Long Point	1	0	0	0	0	0
McFaddin	0	0	0	0	1	1
Markham	1	339	0	0	0	0
Nome	5	882	1	1	3	4
Old Ocean	0	0	0	1	1	2
Orchard	0	0	0	0	2	2
Palacios	0	0	0	0	2	2
Pickett Ridge	0	0	0	0	1	1
Pierce Jct.	1	125	1	0	1	1
Placedo	8	844	0	1	6	7
Raccoon Bend	1	0	1	0	0	0
Refugio	2	1,050	0	1	2	3
Sandy Point	2	15	1	0	0	0
Silsbee	2	752	0	2	2	4
Seabreeze	1	0	0	0	1	1
Segno	4	1,825	0	1	4	5
Splendora	1	0	1	0	0	0
S. Houston	1	412	0	0	2	2
Spurger	0	0	0	0	1	1
Telfener	0	0	0	0	1	1
Thompson	2	291	0	0	0	0

Tomball	10	2,105	1	2	4	6
Turtle Bay	1	576	0	0	1	1
Quintana-Oconnor	10	13,753	0	4	4	8
Van Vleck	0	0	0	0	1	1
W. Columbia	1	500	0	0	0	0
Withers	3	602	0	0	2	2
Misc.	8	0	8	2	14	16
Total June	167	67,888	23	41	129	170
Total May	168	51,422	35	32	146	178
Difference	1	16,466	12	9	17	8

Gas wells: Dickinson 1, Livingston 1, Long Point 1, Nome 1, Placedo 2, Seabreeze 1, Tomball 4; total 11.

COASTAL LOUISIANA

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Abbeville	0	0	0	0	1	1
Bayou Blue	0	0	0	1	0	1
Bayou Boullion	0	0	0	0	1	1
Bay St. Elaine	0	0	0	0	2	2
Bayou Cocotriz	0	0	0	0	2	2
Big Lake	0	0	0	0	1	1
Black Bayou	1	0	1	0	0	0
Caillou Island	2	2,096	0	0	1	1
Cameron Meadows	1	0	1	1	1	2
Charenton	0	0	0	0	2	2
Choctaw	1	0	1	0	2	2
Darrow	2	744	1	0	0	0
Dog Lake	0	0	0	0	1	1
Fausse Point	0	0	0	0	1	1
Four Isle	0	0	0	0	1	1
Gillis	4	770	1	1	3	4
Garden Isl.	1	256	0	0	1	1
Gueydan	0	0	0	0	1	1
Hackberry	4	962	2	2	11	13
Iowa	1	579	0	0	1	1
Jeanerette	1	862	0	1	2	3
Jennings	4	2,696	0	3	10	13
Lafitte	0	0	0	0	3	3
Lake Hermitage	0	0	0	0	1	1
Lake Pelto	0	0	0	0	1	1
Laritte	0	0	0	1	0	1
Leesville	3	1,419	0	1	1	2
Lockport	0	0	0	0	1	1
New Iberia	1	632	0	0	5	5
Port Barre	1	0	1	0	0	0
Roanoke	0	0	0	0	1	1
Sorrento	0	0	0	0	1	1
S. Roanoke	0	0	0	0	1	1
Starks	1	0	1	0	1	1
S. Jennings	1	0	1	0	0	0
St. Martinsville	0	0	0	0	2	2
Sulphur	0	0	0	0	2	2
Tepetate	3	340	1	1	2	3
Valentine	3	953	1	2	1	3
Vinton	0	0	0	0	1	1
White Castle	1	0	1	0	0	0
Misc.	7	0	7	5	22	27
Total June	43	12,309	20	19	91	110
Total May	37	16,602	2	22	90	112
Difference	6	4,293	18	3	1	2

Gas wells: Gillis 1.

ALABAMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Choctaw	0	0	0	0	1	1
Green	0	0	0	1	0	1
Houston	0	0	0	0	1	1
Total June	0	0	0	1	2	3
Total May	0	0	0	1	2	3
Difference	0	0	0	0	0	0

Gas wells completed: None.

NORTH LOUISIANA

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bienville	1	0	0	0	5	5
Bossier	3	20	0	0	7	7
Caddo-Rodessa	8	3,483	0	3	17	20
Caddo-Other	11	603	0	5	23	28
Claiborne	20	12,592	1	6	14	20
DeSoto	2	0	2	1	5	6
Franklin	0	0	0	0	1	1
Grant	1	0	1	0	4	4
Jackson	0	0	0	0	1	1
LaSalle	0	0	0	3	0	3
Lincoln	2	420	1	4	4	8
Morehouse	1	0	0	2	3	5
Natchitoches	0	0	0	0	2	2
Ouachita	1	0	0	3	4	7
Red River	1	62	0	0	6	6
Sabine	4	143	1	5	6	11
Tensas	1	0	1	0	2	2
Union	4	0	0	2	6	8
Webster	6	2,035	1	2	11	13
Winn	0	0	0	1	0	1
Total June	66	19,358	8	37	121	158
Total May	71	16,043	17	26	118	144
Difference	5	3,315	9	11	3	14

Gas wells completed and production: Bienville Parish, 1 well, 55,543,000 feet; Bossier, 2 wells, 61,000,000 feet; Caddo-Rodessa, 1 well, 51,000,000 feet; Caddo-other, 1 well, 1,500,000 feet; Morehouse, 1 well, 9,000,000 feet; Ouachita, 1 well, 2,000,000 feet; Union, 4 wells, 54,000,000 feet. Total, 11 wells, 234,043,000 feet.

ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Ashley	0	0	0	0	1	1
Calhoun	0	0	0	0	1	1
Cleveland	0	0	0	0	1	1
Clark	1	0	1	0	2	2
Columbia	0	0	0	1	0	1
Critterton	0	0	0	0	1	1
Dallas	1	0	1	0	0	0
Hempstead	1	0	1	0	3	3
Howard	0	0	0	1	0	1
LaFayette	1	0	1	0	1	1
Little River	1	0	1	0	1	1
Lonoke	0	0	0	1	1	2
Miller	1	1,150	0	5	7	12
Nevada	3	10	2	4	3	7
Ouachita	2	0	2	0	1	1
Paluski	0	0	0	0	1	1
Saline	0	0	0	0	1	1
St. Francis	0	0	0	1	0	1
Union	4	2,401	1	5	19	24
Total June	15	3,561	10	18	44	62
Total May	16	1,770	10	10	33	43
Difference	1	1,791	0	8	11	19

Gas wells: None.

MISSISSIPPI

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Amity	1	0	1	0	0	0
Bolivar	0	0	0	0	2	2
Sunflower	0	0	0	1	0	1
Wilkinson	0	0	0	1	1	2
Washington	0	0	0	0	1	1
Simpson	0	0	0	1	0	1
Claiborne	0	0	0	0	1	1
Jones	0	0	0	0	1	1
George	0	0	0	0	1	1
Grenada	0	0	0	1	0	1
Lamar	0	0	0	0	2	2
Harrison	0	0	0	0	1	1
Yalobusha	0	0	0	1	0	1
Kemper	0	0	0	1	0	1
Pike	0	0	0	0	1	1
Madison	0	0	0	0	1	1
Total June	1	0	1	6	12	18
Total May	2	0	2	7	11	18
Difference	1	0	1	1	1	0

Gas wells completed: None.

FLORIDA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Key	0	0	0	1	0	1
Lake	0	0	0	0	2	2
Nassau	0	0	0	0	1	1
Polk	0	0	0	1	0	1
Hillsborough	0	0	0	0	1	1
Total June	0	0	0	2	4	6
Total May	0	0	0	2	4	6
Difference	0	0	0	0	0	0

Gas wells completed: None.

ROCKY MOUNTAIN AREA

Wyoming

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Albany	2	528	0	0	3	3
Big Horn	0	0	0	0	10	10
Carbon	0	0	0	2	9	11
Converse	1	50	0	2	3	5
Fremont	0	0	0	0	5	5
Lincoln	0	0	0	0	4	4
Natrona	0	0	0	0	6	6
Niobrara	2	2,229	0	2	11	13
Park	0	0	0	1	4	5
Sweetwater	1	0	0	0	1	1
Uinta	0	0	0	1	2	3
Washakie	0	0	0	0	5	5
Weston	0	0	0	2	4	6
Miscellaneous	0	0	0	0	3	3
Total, June	6	2,807	0	10	70	80
Total, May	13	5,769	4	15	61	76
Difference	7	2,962	4	5	9	4

Gas wells: Albany 1, Sweetwater 1, total 2.

Colorado

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Adams	0	0	0	0	2	2
Archuleta	0	0	0	0	7	7
Boulder	0	0	0	0	2	2
La Plata	0	0	0	0	3	3
Larimer	0	0	0	0	3	3
Las Animas	0	0	0	0	2	2
Moffat	0	0	0	1	6	7
Park	0	0	0	0	3	3
Miscellaneous	0	0	0	3	14	17
Total, June	0	0	0	4	42	46
Total, May	1	0	1	4	34	38
Difference	1	0	1	0	8	8

Gas wells, 0.

Utah

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Emery County	1	0	1	0	0	0
Miscellaneous	0	0	0	0	9	9
Total, June	1	0	1	0	9	9
Total, May	0	0	0	1	9	10
Difference	1	0	1	1	0	1

New Mexico

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bernalillo	0	0	0	0	2	2
McKinley	0	0	0	0	6	6
Santa Fe	0	0	0	0	2	2
San Juan	0	0	0	0	4	4
San Miguel	0	0	0	0	3	3
Socorro	0	0	0	0	1	1
Valencia	0	0	0	0	2	2
Lea	62	65,347	2	7	96	103
Eddy	4	413	1	2	24	26
Chaves	2	0	2	0	1	1
Roosevelt	2	0	2	0	2	2
Otero	0	0	0	0	2	2
Curry	0	0	0	0	1	1
Dona Ana	0	0	0	0	1	1
Quay	0	0	0	0	1	1
Torrance	0	0	0	0	1	1
Mora	0	0	0	1	0	1
Harding	4	0	0	1	4	5
Total June	74	65,760	7	11	153	164
Total May	61	63,925	2	21	154	175
Difference	13	1,835	5	10	1	11

Gas wells completed: Lea 1, Harding 4. Total 5.

Montana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Big Horn	0	0	0	0	2	2
Carbon	0	0	0	0	5	5
Fergus	3	0	0	0	5	5
Glacier	13	1,841	2	3	13	16
Petroleum	0	0	0	0	3	3
Phillips	0	0	0	0	3	3
Pondera	1	0	1	1	1	2
Toole	10	620	1	1	21	22
Yellowstone	0	0	0	0	2	2
Miscellaneous	0	0	0	0	11	11
Total, June	26	2,461	7	5	66	71
Total, May	28	2,221	6	5	68	78
Difference	2	240	1	0	2	2

Gas wells, 0.

Nebraska

Summary of Field Operations

	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Total, June	0	0	0	0	7	7
Total, May	0	0	0	0	4	4
Difference	0	0	0	0	3	3

EASTERN FIELDS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bradford	*245	257	0	21	78	99
Allegany	†99	70	0	10	33	43
Venango-Clarion	‡25	22	1	2	28	30
Butler-Armstrong	14	35	1	0	15	15
Southwest Penna.	15	50	4	10	46	56
Southeast Ohio	38	379	14	14	59	73
W. Virginia	76	114	9	34	174	208
N. Y.-Penna. Gas	5	0	3	8	18	26
Total June	516	927	32	99	451	550
Total May	495	1,434	30	103	432	535
Difference	21	507	2	4	19	15

*Includes 68 water intake wells. ‡Includes 9 pressure wells. †Includes 33 water intake wells.

Gas wells completed: Venango-Clarion 1, Butler-Armstrong 2, Southwest Penna. 7, Southeast Ohio 7, West Virginia 45, N. Y.-Penna. gas field 2. Total 54.

MICHIGAN

Summary of Field Operations

Pool—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Buckeye	52	47,190	0	11	82	93
Clayton	0	0	0	4	9	13
Crystal	0	0	0	0	1	1
Curtice	0	0	0	0	3	3
Deerfield	0	0	0	0	1	1
Leaton	0	0	0	0	2	2
Mecosta	0	0	0	0	3	3
Mt. Pleasant	1	750	0	0	4	4
Porter-Yost.	3	222	1	2	3	5
Ravenna	1	0	0	0	2	2
Salem	5	3,275	0	4	10	14
Sherman	6	2,799	0	2	12	14
W. Branch	7	310	1	3	11	14
Wildcats	9	0	9	7	36	43
Belvidere	2	0	0	0	0	0
Ttl. June	86	54,546	11	33	179	212
Ttl. May	90	41,615	18	32	168	200
Difference	6	12,931	7	1	11	12

Note—In May report, under "Rigs," 50 locations were included. Gas wells completed: Ravenna 1, Belvidere 2.

KENTUCKY FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Powell	1	0	1	0	3	3
Lee	12	240	2	0	9	9
Estill	11	52	0	0	9	9
Lawrence	2	12	0	0	2	2
Johnson	1	0	1	0	1	1
Magoffin	3	16	0	0	0	0
Floyd	9	0	0	0	7	7
Knott	3	0	0	0	2	2
Martin	5	0	0	0	5	5
Pike	2	0	0	0	0	0
Hancock	18	325	2	0	12	12
Henderson	1	0	1	0	1	1
Ohio	13	185	8	0	18	18
McLean-Ohio	14	1,655	1	0	10	10
McLean	1	0	1	0	4	4
Muhlenberg	0	0	0	0	1	1
Daviess	6	75	1	0	7	7
Hopkins	0	0	0	0	2	2
Webster	0	0	0	0	1	1
Breckenridge	1	0	1	0	1	1
Ttl. June	103	2,572	18	0	97	97
Ttl. May	69	1,224	10	0	78	78
Difference	34	1,348	8	0	19	19

Gas wells completed: Knott 3, Floyd 9, Pike 2, Martin 5, Hancock 6, McLean-Ohio 2, total 27.

LIMA FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Allen	1	12	0	0	0	0
Auglaize	1	0	1	0	0	0
Darke	0	0	0	0	1	1
Hardin	0	0	0	0	4	4
Henry	0	0	0	0	4	4
Hancock	1	35	0	0	3	3
Mercer	2	15	1	0	2	2
Ottawa	1	0	0	0	0	0
Putnam	0	0	0	0	2	2
Logan	0	0	0	0	2	2
Lucas	0	0	0	0	2	2
Sandusky	0	0	0	0	3	3
Shelby	0	0	0	0	2	2
Seneca	0	0	0	0	3	3
Wood	1	0	1	0	2	2
Wyandot	0	0	0	0	2	2
Ttl. June	7	62	3	0	32	32
Ttl. May	6	2	3	7	32	39
Difference	1	60	0	7	0	7

Gas wells completed: Ottawa 1.

ILLINOIS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bond	0	0	0	0	1	1
Christian	0	0	0	1	1	2
Clark	0	0	0	0	1	1
Clay	0	0	0	4	7	11
Clinton	2	200	1	1	2	3
Edwards	0	0	0	0	1	1
Fayette	0	0	0	0	3	3
Jefferson	0	0	0	0	1	1
Marion	3	90	1	3	15	18
Massac	0	0	0	0	1	1
Perry	0	0	0	0	1	1
Randolph	0	0	0	0	1	1
Richland	0	0	0	0	1	1
St. Clair	0	0	0	0	1	1
Wayne	0	0	0	2	4	6
Lawrence	1	0	1	0	1	1
Effingham	0	0	0	0	1	1
McDonough	0	0	0	0	1	1
Jasper	1	0	1	0	0	0
Washington	0	0	0	0	3	3
Harden	1	0	1	0	0	0
Ttl. June	8	290	5	11	47	58
Ttl. May	14	2,809	3	3	36	39
Difference	6	2,519	2	8	11	19

Gas wells completed: Marion 1.

OHIO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Ashland	1	0	0	1	7	8
Ashtabula	0	0	0	0	1	1
Athens	10	23	4	3	10	13
Belmont	0	0	0	3	6	9
Coshocton	0	0	0	2	4	6
Cuyahoga	2	29	0	0	1	1
Delaware	0	0	0	0	1	1
Fairfield	0	0	0	2	5	7
Guernsey	6	0	3	3	14	17
Gallia	0	0	0	0	1	1
Huron	6	0	0	0	4	4
Holmes	0	0	0	3	3	6
Hocking	3	0	2	2	4	6
Jefferson	0	0	0	0	1	1
Knox	4	132	1	3	8	11
Lawrence	1	0	0	0	0	0
Licking	9	148	0	0	7	7
Lorain	3	0	1	3	3	6
Medina	1	0	1	0	3	3
Meigs	5	3	2	3	13	16
Morgan	6	7	0	2	6	8
Monroe	8	9	1	4	6	10
Muskingum	3	137	0	1	4	5
Noble	3	0	2	1	8	9
Perry	2	35	0	4	8	12
Portage	0	0	0	0	1	1
Richland	0	0	0	0	4	4
Stark	2	0	0	1	7	8
Summit	3	0	1	0	3	3
Tuscarawas	0	0	0	2	7	9
Wayne	1	25	0	0	5	5
Washington	12	12	4	3	13	16
Venton	3	16	1	0	1	1
Total June	94	576	24	46	169	215
Total May	84	638	21	72	186	258
Difference	10	62	3	26	17	43

Gas wells completed: Ashland 1, Athens 3, Guernsey 3, Huron 6, Hocking 1, Knox 1, Lawrence 1, Licking 3, Lorain 2, Monroe 4, Meigs 2, Morgan 2, Muskingum 1, Noble 1, Perry 1, Stark 2, Summit 2, Washington 5. Total 41.

INDIANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Crawford	0	0	0	0	1	1
Daviess	1	0	1	0	0	0
Decatur	0	0	0	0	1	1
DeKalb	0	0	0	0	1	1
Gibson	0	0	1	0	0	0
Hamilton	0	0	0	0	1	1
Harrison	0	0	0	0	1	1
Knox	0	0	0	0	3	3
LaGrange	0	0	0	0	2	2
Martin	0	0	0	0	1	1
Perry	0	0	0	0	5	5
Pike	3	20	1	0	3	3
Rush	0	0	0	0	1	1
Spencer	3	2	2	0	4	4
Sullivan	1	3	0	0	2	2
Vanderburgh	1	10	0	0	0	0
Vigo	1	0	1	0	1	1
Total June	10	35	6	0	27	27
Total May	8	25	3	0	35	35
Difference	2	10	3	0	8	8

Gas wells completed: None.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil, No. 1-24 Capitan, Santa Barbara Co.	32- 5-30	1,328	flow. 900 b.d
Shell Oil, No. 1-26 Capitan, Santa Barbara Co.	32- 5-30	650	sd. sh. drlg.
Texas Co., No. 1 Careaga, Santa Barbara Co.	1- 4-31	965	hd. sd. drlg.
Hancock-Bush, No. 2-B Santa Maria, Santa Barbara	25-10-34	3,824	pump. 300 b.d
Hancock-Bush, No. 1-R Santa Maria, Santa Barbara	25-10-34	606	sd. sh. drlg.
Sed Oil, No. 1 Mills, Santa Maria, Santa Barbara Co.	27-10-34	2,000	will cmt.
Union Oil, No. 3-M Santa Maria, Santa Barbara Co.	30-10-33	3,800	pump. 250 b.d.
Union Oil, No. 1-19-E Santa Maria, Santa Barbara Co.	23-10-34	2,262	sd. sh. drlg.
Union Oil, No. 1-C Santa Maria, Santa Barbara Co.	30-10-33	4,145	sd. sh. drlg.
Union Oil, No. 1-B Santa Maria, Santa Barbara Co.	21-10-34	2,970	sd. sh. drlg.
Union Oil, No. 19 Orcutt, Santa Barbara Co.	26- 9-34	3,635	O.S. drlg.
Pac. Western Oil, No. 1 Santa Maria, Santa Barbara	21-10-34	4,227	flow. 350 b.d.
Rice Ranch Oil, No. 4 Orcutt, Santa Barbara Co.	23- 9-34	4,300	br. sh. drlg.
Valley Oil, No. 1 Casmalia, Santa Barbara Co.	20- 9-34	2,340	pump. water
So. Cal. Drlg., No. 1-H Santa Maria, Santa Barbara	9- 9-33	5,003	cleaning out
101 Oil, No. 1 Pt. Concepcion, Santa Barbara Co.	35- 5-33	365	rigging up
Tide Water A. O., No. 1-L Santa Rita, Santa Barbara	3- 6-33	1,531	sd. sh. drlg.
Hancock Oil, No. 2 Los Alamos, Santa Barbara Co.	6- 7-32	3,087	sd. sh. drlg.
Arnold Oil, No. 2 Los Alamos, Santa Barbara Co.	8- 8-33	5,031	br. sh. drlg.
Field Gasoline, No. 2-C Gato Ridge, Santa Barbara	4- 8-32	3,700	rig. to pump
Nine Springs Oil, No. 1 Los Olivos, Santa Barbara	9- 7-30	3,310	cleaning out
Oatman Mining, No. 1 Mesa, Santa Barbara Co.	28- 4-27	2,002	cleaning out
Del Mar Oil, No. 1 Summerland, Santa Barbara Co.	16- 4-26	2,752	sd. sh. drlg.
Skyline Pet. Co., No. 1 Hopper Canyon, Ventura Co.	13- 4-19	467	sd. sh. drlg.
Petroleum Securities, No. 1 Calumet, Shiells, Ventura	3- 3-19	2,597	sd. sh. drlg.
Texas Co., No. 129 Shiells, Ventura Co.	4- 3-19	4,812	redrlg. 2,950
Texas Co., No. 133 Shiells, Ventura Co.	4- 3-19	984	sd. sh. drlg.
Union Oil, No. 16 Bardsdale, Ventura Co.	12- 3-20	5,308	sd. sh. drlg.
Richfield Oil, No. 1 Camarillo, Ventura Co.	18- 2-30	352	core hole
Condor Oil, No. 1 Sespe, Ventura Co.	6- 4-19	2,031	fish. bailer
Ivers, H. A., No. 14 Star, Ventura Co.	1- 4-20	1,220	sd. sh. drlg.
Topa Topa Oil, No. 2 Sespe, Ventura Co.	33- 5-19	3,656	rd. sd. drlg.
Speik Oil, No. 2 Sespe, Ventura Co.	33- 5-19	2,745	sd. sh. drlg.
Colima Oil, No. 2 Sespe, Ventura Co.	25- 5-19	3,260	O.S. drlg.
Pac. Western Oil, No. 9 Temescal, Ventura Co.	3- 4-18	2,174	sd. sh. drlg.
Vai, Giovani, No. 1 Ojai, Ventura Co.	4- 4-21	792	hd. sh. drlg.
Continental Oil, No. 1 Red Mountain, Ventura Co.	7- 3-23	7,953	hd. sd. drlg.
Continental Oil, No. 7 San Miguelito, Ventura Co.	23- 3-24	6,860	flow. 1,104 b.d.
C. C. M. Oil, No. 2 Padre Canyon, Ventura Co.	23- 3-24	6,465	redrlg. 6,250
Continental Oil, No. 3 Padre Canyon, Ventura Co.	15- 3-24	7,291	idle
C. C. M. Oil, No. 14 Rincon, Ventura Co.	17- 3-24	3,750	O.S. drlg.
C. C. M. Oil, No. 15 Rincon, Ventura Co.	17- 3-24	3,197	br. sh. drlg.
Richfield Oil, No. 2 Hobson, Rincon, Ventura Co.	8- 3-24	2,671	sd. sh. drlg.
El Rio Oil, No. 1 Oxnard, Ventura Co.	6- 1-21	3,000	pump. 15 b.d.
Tide Water A. O., No. 31 V.L.W., Ventura, Ventura	24- 3-23	5,763	sd. sh. drlg.
Tide Water A. O., No. 61 Lloyd, Ventura, Ventura	27- 3-23	1,810	sd. sh. drlg.
Tide Water A. O., No. 62 Lloyd, Ventura, Ventura	27- 3-23	3,691	sd. sh. drlg.
Tide Water A. O., No. 137 Lloyd, Ventura, Ventura	27- 3-23	8,197	gr. sd. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	4,191	sd. sh. drlg.
Shell Oil, No. 91 Taylor, Ventura, Ventura Co.	30- 3-23	8,085	sd. sh. drlg.
Shell Oil, No. 35 Gosnell, Ventura, Ventura Co.	28- 3-23	8,950	redrlg. 8,240
General Pet., No. 17 Barnard, Ventura, Ventura Co.	23- 3-23	8,176	D.P. stuck
Den Petroleum, No. 1 Devils Den, Kern Co.	20-25-19	4,276	cleaning out
Texas Co., No. 2-32 Theta, Lost Hills, Kern Co.	2-26-20	1,226	pump. 105 b.d.
Amerada Pet., No. 1 Blackwell Corner, Kern Co.	17-26-19	2,670	pump. 75 b.d.
East Puente Oil, No. 23-11 McKittrick, Kern Co.	11-30-21	1,313	rig. to pump
Continental Oil, No. 2 Wasco, Kern Co.	8-27-24	5,070	sd. sh. drlg.
Seaboard Oil, No. 1 Wasco, Kern Co.	26-27-24	10,102	br. sh. drlg.
Belridge Oil, No. 3-35 North Belridge, Kern Co.	35-27-20	8,319	O.S. drlg.
Belridge Oil, No. 53-26 North Belridge, Kern Co.	26-27-20	139	sd. sh. drlg.
Belridge Oil, No. 61-26 North Belridge, Kern Co.	26-27-20	3,892	br. sh. drlg.
Belridge Oil, No. 28-1 North Belridge, Kern Co.	1-28-20	4,221	sd. sh. drlg.
Continental Oil, No. 9 North Belridge, Kern Co.	36-27-20	8,065	hd. sh. drlg.
Tide Water Associated, No. 6 North Belridge, Kern	34-27-20	7,451	br. sh. drlg.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	6,585	br. sh. drlg.
Ohio Oil, No. 1 Hopkins, South Belridge, Kern Co.	4-29-31	954	sd. sh. drlg.
Santa Ynez Oil, No. 1 Temblor, Kern Co.	36-29-20	1,499	sd. sh. drlg.
Honolulu Oil, No. 21 Round Mountain, Kern Co.	20-28-29	1,933	pump. 116 b.d.
Honolulu Oil, No. 35 Round Mountain, Kern Co.	20-28-29	1,561	sd. sh. drlg.
Honolulu Oil, No. 13 Round Mountain, Kern Co.	18-28-29	1,955	pump. 365 b.d.
Republic Pet., No. 2 Cal Tech, Kern Front, Kern Co.	24-28-27	1,909	pump. 285 b.d.
Republic Pet., No. 18-S Kern Front, Kern Co.	24-28-27	1,652	sd. sh. drlg.
McDonald & Dearin, No. 4 Carrie, Kern Front, Kern	10-28-27	2,141	recmtd. 1,984
Apex Petroleum, No. 10-3 Kern Front, Kern Co.	10-28-27	2,247	O.S. drlg.
Associated Hold., No. 1-H Kern Front, Kern Co.	11-28-27	1,960	O.S. drlg.
Oils, Inc., of California, No. 7-2 Kern Front, Kern Co.	13-28-27	1,289	P.B. 1,247
General Pet., No. 53 Young, Kern Front, Kern Co.	13-28-27	1,989	P.B. 1,925
California Star Oil, No. 10-80 Kern Front, Kern Co.	22-27-27	2,702	rig. to pump
Texas Co., No. 7 Lehman, Kern Front, Kern Co.	23-28-27	2,125	cleaning out
Shell Oil, No. 1 Bellview, Kern Co.	31-29-27	5,997	sd. sh. drlg.
Superior Oil, No. 2 Bakersfield, Kern Co.	36-29-28	2,873	O.S. drlg.
Palmer & Luse, No. 1 Kern River, Kern Co.	10-28-28	1,457	sd. sh. drlg.
Italo Pet., No. 1-K Kern River, Kern Co.	19-28-28	2,477	sd. sh. drlg.
McKeon, Inc., No. 1-C Kern River, Kern Co.	32-28-28	1,350	sd. sh. drlg.
Ring Oil, No. 1-S Mount Poso, Kern Co.	32-26-28	1,738	pump. 260 b.d.
C. C. M. Oil, No. 1 Carter, Mount Poso, Kern Co.	7-27-27	4,286	gr. sd. drlg.
Framac Oil, No. 1 Brown, Mount Poso, Kern Co.	22-27-27	1,351	fish. D.P.
Chevalier, J. J., No. 3 S.P., Mount Poso, Kern Co.	3-27-28	1,475	cleaning out
Vanguard Oil, No. 7 Baker, Mount Poso, Kern Co.	33-27-28	1,746	pump. 345 b.d
Shell Oil, No. 20 Security, Mount Poso, Kern Co.	16-27-28	1,794	rig. to pump
Shell Oil, No. 21 Security, Mount Poso, Kern Co.	16-27-28	1,540	sd. sh. drlg.
General Pet., No. 1 West Premier, Kern Co.	36-27-26	2,051	sd. sh. drlg.
Banducci, L. J., No. 2-T Fruitvale, Kern Co.	26-29-27	3,770	cleaning out
Western Gulf Oil, No. 2-M Fruitvale, Kern Co.	27-29-27	3,773	O.S. drlg.
Wilbur, V. R. G., No. 1 Fruitvale, Kern Co.	22-29-27	3,835	pump. 112 b.d.
Simmel, L. C., No. 1 Fruitvale, Kern Co.	23-29-27	3,031	sd. sh. drlg.
Gardner & Powell, No. 1 Fruitvale, Kern Co.	23-29-27	504	cmtd. 504
Mohawk Pet., No. 4-23 K.C.L., Fruitvale, Kern Co.	23-29-27	3,710	O.S. drlg.
B. & O. Oil, No. 1-T Fruitvale, Kern Co.	14-29-27	2,944	gr. sd. drlg.
Meridian Oil, No. 4-T Fruitvale, Kern Co.	23-29-27	1,796	sd. sh. drlg.
Mesa Pet., No. 1-L Fruitvale, Kern Co.	28-29-27	3,392	dry; abd.
American Expl., No. 1-G Mountain View, Kern Co.	18-30-29	4,792	P.B. 4,722
American Expl., No. 1-C Mountain View, Kern Co.	18-30-29	4,730	redrlg. 3,054
Standard Oil, No. 5-M Mountain View, Kern Co.	18-30-29	3,970	sd. sh. drlg.
Tracy Drlg., No. 1-B Mountain View, Kern Co.	19-30-29	5,165	pump. 70 b.d.
Mohawk Pet., No. 4 Earl Fruit, Mountain View, Kern	4-31-29	5,730	deepening
Ohio Oil, No. 2-B Mountain View, Kern Co.	33-30-29	1,761	sd. sh. drlg.
Petrol Prod., No. 1 Earl, Mountain View, Kern Co.	4-31-29	2,760	sd. sh. drlg.
Hogan Pet., No. 4 Symons, Mountain View, Kern Co.	5-31-29	6,188	cleaning out
Hogan Pet., No. 10 Porter, Mountain View, Kern Co.	29-30-29	4,397	sd. sh. drlg.
Greer, P. H., No. 2 Perrel, Mountain View, Kern Co.	9-31-29	6,370	gr. sd. drlg.
Golden Bear Oil, No. 1 Edison, Mountain View, Kern	12-30-29	1,633	dry; abd.
Monterey Expl., No. 6 Duff, Edison, Kern Co.	15-30-29	3,412	pump. 184 b.d.
Berree Oil, No. 6 Seale, Edison, Kern Co.	5-30-29	2,297	sd. sh. drlg.
Cajalco Pet., No. 1 Brown, Edison, Kern Co.	9-30-30	3,465	gr. sd. drlg.
Metro Oil, No. 2 Edison, Kern Co.	6-30-29	2,593	P.B. 2,530
East Edison Oil, No. 2 Edison, Kern Co.	23-30-30	1,898	hd. sd. drlg.
Arkelo Oil, No. 1 Lerdo, Kern Co.	23-28-26	10,050	fish. D.P.
Union Oil, No. 1-34 Rio Bravo, Kern Co.	34-28-25	9,900	br. sh. drlg.
Continental Oil, No. 1 Rosedale, Kern Co.	12-29-26	9,735	gr. sd. drlg.
Standard Oil, No. 11-4 KCL, Greeley, Kern Co.	20-29-26	7,691	O.S. drlg.
Standard Oil, No. 11-6 KCL, Greeley, Kern Co.	17-29-26	7,174	sd. sh. drlg.
Standard Oil, No. 12-1 KCL, Greeley, Kern Co.	30-29-26	7,886	flow. 80 b.d.
Union Oil, No. 4 San Emidio, Kern Co.	31-11-22	2,025	br. sh. drlg.
Shell Oil, No. 21-14 Old River, Kern Co.	14-30-25	8,613	reaming
Shell Oil, No. 58-29 Ten Section, Kern Co.	29-30-26	8,236	O.S. drlg.
Ohio Oil, No. 2-E Ten Section, Kern Co.	6-30-26	8,768	dry; abd.
C. C. M. Oil, No. 22-21 Midway-Sunset, Kern Co.	28-32-23	2,039	O.S. drlg.
C. C. M. Oil, No. 32-21 Midway-Sunset, Kern Co.	21-32-23	2,015	br. sh. drlg.
Evans, H. B., No. 19 Midway-Sunset, Kern Co.	35-32-23	900	sd. sh. drlg.
Signal Oil, No. 5-W Midway-Sunset, Kern Co.	8-11-23	2,915	rig. to pump
Monticello Oil, No. 4 Midway-Sunset, Kern Co.	27-31-22	882	sd. sh. drlg.
Ethel D Oil, No. 43 Midway-Sunset, Kern Co.	36-12-24	1,313	O.S. drlg.
Standard Oil, No. 7-13-D Midway-Sunset, Kern Co.	13-32-24	3,585	O.S. drlg.
Standard Oil, No. 50-33-D Midway-Sunset, Kern Co.	33-32-24	2,795	sd. sh. drlg.
Merritt-Annex Oil, No. 5 Fried, Midway-Sunset, Kern	25-12-24	2,713	O.S. drlg.
Quality Oil, No. 1-W.P., Midway-Sunset, Kern Co.	27-32-23	1,061	sd. sh. drlg.
U. S. Pumping Equip., No. 5 Midway-Sunset, Kern Co.	12-11-24	1,660	rig. to pump
General Pet., No. 49-B Midway-Sunset, Kern Co.	24-31-23	4,495	bailing
Hoyt, Otis, No. 6 Midway-Sunset, Kern Co.	7-11-23	1,843	P.B. 1,800
Richfield Oil, No. 13-D Crampton, Elk Hills, Kern Co.	1-31-24	3,282	sd. sh. drlg.
Reserve Oil & Gas, No. 33-4 Tejon, Kern Co.	33-11-19	5,121	hd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Wilshire Oil, No. 1 Tejon, Kern Co.	5-10-19	4,841	sd. sh. drlg.
Ohio Oil, No. 2 Tejon, Kern Co.	21-11-19	9,654	basement
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	10,753	cmtd. 10,715
K. N. D. A., No. 47-28-J Kettleman North, Fresno Co.	28-21-17	4,642	sd. sh. drlg.
K. N. D. A., No. 67-28-J Kettleman North, Fresno Co.	28-21-17	7,501	sd. sh. drlg.
K. N. D. A., No. 78-28-J Kettleman North, Fresno Co.	28-21-17	8,140	cleaning out
K. N. D. A., No. 2-34-J Kettleman North, Fresno Co.	34-21-17	7,940	C.P. 7,342
K. N. D. A., No. 32-34-J Kettleman North, Fresno Co.	34-21-17	7,700	swabbing
K. N. D. A., No. 41-4-P Kettleman North, Fresno Co.	4-22-17	6,873	br. sh. drlg.
K. N. D. A., No. 83-4-P Kettleman North, Fresno Co.	4-22-17	2,977	sd. sh. drlg.
Standard Oil, No. 41-33-J Kettleman North, Fresno	33-21-17	7,191	sd. sh. drlg.
Standard Oil, No. 4-3-P Kettleman North, Kings Co.	3-22-17	6,681	br. sh. drlg.
Standard Oil, No. 78-3-P Kettleman North, Kings Co.	3-22-17	8,005	fish. D.P.
Temblor Oil, No. 1-B Kettleman Middle, Kings Co.	25-23-18	6,597	sd. sh. drlg.
Bisconer, R., No. 1 Cloud, Kings Co.	11-24-20	1,454	sd. sh. drlg.
Birch-Ranch Oil, No. 1 Orr, Kings Co.	5-23-17	2,252	sd. sh. drlg.
Dudley Ridge Dev., No. 1 Tulare Lake, Kings Co.	24-23-20	1,250	bl. sh. drlg.
Tri-Counties Oil, No. 1 Tulare Lake, Kings Co.	10-23-22	4,300	will deepen
Temblor Oil, No. 1 Panorama, San Luis Obispo Co.	22-32-21	1,887	sd. sh. drlg.
Lewis, A. O., No. 1 Pecho, San Luis Obispo Co.	34-30-10	2,774	C.P. 2,320
Shell Oil, No. 1 Pleyto, Monterey Co.	34-24-10	8,994	shooting
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	1,104	sd. sh. drlg.
California Oils, Inc., No. 1 Parkfield, Monterey Co.	33-23-15	3,500	resume work
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	7,708	cleaning out
Amerada Pet., No. 1 Triqueiro, Rio Vista, Solano Co.	24- 4-2	4,422	gas well
Buttes Oilfields, Ltd., No. 1 Kent, Sutter Co.	2-15-1	5,810	fish. D.P.
Turner, L. E., No. 1 Tipton, Tulare Co.	15-22-26	2,165	sd. sh. drlg.
Jennings, E. P., No. 1 Allensworth, Tulare Co.	4-24-23	2,709	idle
Standard Oil, No. 1 Middle River, San Joaquin Co.	24- 1-5	5,866	salt water
Texas Co., No. 1 Roberts Island, San Joaquin Co.	8- 1-6	3,771	sd. sh. drlg.
Coast Expl., Well No. 1, Stanislaus Co.	30- 4-9	5,998	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Richfield Oil, No. 6 El Segundo, Los Angeles Co.	18- 3-14	7,000	sd. sh. drlg.
Richfield Oil, No. 1-SF El Segundo, Los Angeles Co.	18- 3-14	7,664	deepening
Richfield Oil, No. 1 Elsie, El Segundo, Los Angeles	12- 3-15	6,693	sd. sh. drlg.
Ohio Oil, No. 4 Gough, El Segundo, Los Angeles Co.	7- 3-14	7,174	Schist
Ohio Oil, No. 5 Gough, El Segundo, Los Angeles Co.	7- 3-14	7,352	Schist
Texas Co., No. 3 Security, El Segundo, Los Angeles	18- 3-14	467	sd. sh. drlg.
Republic Petroleum, No. 8 El Segundo, Los Angeles	18- 3-14	7,565	deepening
Lennox Pet., No. 1 Hawthorne, Los Angeles Co.	3- 3-14	3,198	sd. sh. drlg.
Douglas Oil, No. 9 Peck, Lawndale, Los Angeles Co.	20- 3-14	6,550	sd. sh. drlg.
Calizoo Oil, No. 1 S.L.A., Los Angeles Co.	16- 3-13	6,820	hd. sd. drlg.
B. C. L. Oil, No. 1-Q Torrance, Los Angeles Co.	16- 4-14	1,542	sd. sh. drlg.
I. V. Oil, No. 1 Torrance, Los Angeles Co.	16- 4-14	2,386	sd. sh. drlg.
Calmore Oil, No. 1 C.O.C., Torrance, Los Angeles Co.	6- 4-14	3,830	rig. to pump
C. C. M. Oil, No. 34-T Torrance, Los Angeles Co.	16- 4-14	4,282	br. sh. drlg.
Bass & Goodknight, No. 8 Torrance, Los Angeles Co.	16- 4-14	1,981	sd. sh. drlg.
McLaren & Assoc., No. 1 Palos Verdes, Los Angeles	27- 4-14	3,992	redrlg. 1,945
K. & I. Corp., No. 25 Rubel, Inglewood, Los Angeles	8- 2-14	3,835	O.S. drlg.
Country Club Oil, No. 1 Inglewood, Los Angeles Co.	19- 2-14	3,480	sd. sh. drlg.
Shell Oil, No. 90 Reyes, Dominguez, Los Angeles Co.	33- 3-13	9,598	fishing
Shell Oil, No. 91 Reyes, Dominguez, Los Angeles Co.	33- 3-13	2,861	sd. sh. drlg.
Union Oil, No. 50 Callender, Dominguez, Los Angeles	33- 3-13	10,435	P.B. 9,605
Union Oil, No. 54 Callender, Dominguez, Los Angeles	33- 3-13	4,581	sd. sh. drlg.
Union Oil, No. 55 Callender, Dominguez, Los Angeles	33- 3-13	6,273	sd. sh. drlg.
Union Oil, No. 47 Hellman, Dominguez, Los Angeles	33- 3-13	5,397	sd. sh. drlg.
Barnsdall Oil, No. 16 O'Dea, Rosecrans, Los Angeles	18- 3-13	6,194	sd. sh. drlg.
Barnsdall Oil, No. 17 O'Dea, Rosecrans, Los Angeles	18- 3-13	4,556	sd. sh. drlg.
Union Oil, No. 16 Rosecrans, Los Angeles Co.	18- 3-13	7,560	will cmt.
Macrate, A. N., No. 2 Rosecrans, Los Angeles Co.	17- 3-13	5,281	sd. sh. drlg.
Universal Consd., No. 1-T Rosecrans, Los Angeles Co.	18- 3-13	7,362	sd. sh. drlg.
Bolsa Chica Oil, No. 1 Rosecrans, Los Angeles Co.	20- 3-13	7,530	sd. sh. drlg.
Union Oil, No. 18 D.R., Playa Del Rey, Los Angeles	27- 2-15	6,042	sd. sh. drlg.
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	1,850	sd. sh. drlg.
Barnsdall Oil, No. 2-S.F., Newhall, Los Angeles Co.	26- 4-17	2,510	sd. sh. drlg.
Holbrook Pet., No. 1 Newhall, Los Angeles Co.	28- 4-16	5,822	sd. sh. drlg.
General Pet., No. 3 Ford, Wilmington, Los Angeles	4- 5-13	5,390	flow. 480 b.d.
General Pet., No. 9 Ford, Wilmington, Los Angeles	4- 5-13	4,122	flow. 2,024 b.d.
General Pet., No. 10 Ford, Wilmington, Los Angeles	4- 5-13	3,835	sd. sh. drlg.
General Pet., No. 14 Ford, Wilmington, Los Angeles	4- 5-13	2,281	sd. sh. drlg.
General Pet., No. 2 Isco, Wilmington, Los Angeles	4- 5-13	3,650	O.S. drlg.
General Pet., No. 4-P Wilmington, Los Angeles Co.	4- 5-13	2,551	sd. sh. drlg.
General Pet., No. 4-T Wilmington, Los Angeles Co.	4- 5-13	2,530	sd. sh. drlg.
General Pet., No. 5-T Wilmington, Los Angeles Co.	4- 5-13	3,150	sd. sh. drlg.
A. C. P. Oil, No. 1 Com., Wilmington, Los Angeles	33- 4-13	3,094	sd. sh. drlg.
Bankline Oil, No. 2-C.Y., Wilmington, Los Angeles	33- 4-13	3,493	pump. 237 b.d.
Bankline Oil, No. 7-P.T., Wilmington, Los Angeles	33- 4-13	3,365	pump. 290 b.d.
Bankline Oil, No. 19-P.T., Wilmington, Los Angeles	34- 4-13	3,361	flow. 620 b.d.
Bankline Oil, No. 26-D.H., Wilmington, Los Angeles	34- 4-13	2,981	sd. sh. drlg.
Burnoel Oil, No. 1-E Wilmington, Los Angeles Co.	33- 4-13	3,576	O.S. drlg.
Black Gold Oil, No. 3 Wilmington, Los Angeles Co.	32- 4-13	3,669	flow. 350 b.d.
Carson Oil, No. 1 Wilmington, Los Angeles Co.	31- 4-13	898	sd. sh. drlg.
Crude Oil Drlg., No. 1-W Wilmington, Los Angeles	33- 4-13	1,889	sd. sh. drlg.
Crude Oil Drlg., No. 1-M Wilmington, Los Angeles	33- 4-13	1,178	sd. sh. drlg.
Dunlap, D. D., No. 2 Wilmington, Los Angeles Co.	32- 4-13	3,293	sd. sh. drlg.
Graham-Loftus Oil, No. 1-P Wilmington, Los Angeles	33- 4-13	3,447	P.B. 3,380
Hall, Inc., No. 15-8 Wilmington, Los Angeles Co.	32- 4-13	2,651	sd. sh. drlg.
Hall, Inc., No. 1-B Wilmington, Los Angeles Co.	33- 4-13	3,167	reaming
Hughes, W., No. 1 Wilmington, Los Angeles Co.	33- 4-13	2,551	sd. sh. drlg.
Jergins Trust, No. 4 Wilmington, Los Angeles Co.	34- 4-13	2,580	sd. sh. drlg.
Jergins Trust, No. 6 Wilmington, Los Angeles Co.	34- 4-13	3,251	cmtd. 3,148
Jergins Trust, No. 8 Wilmington, Los Angeles Co.	34- 4-13	2,785	sd. sh. drlg.
Las Vegas L. & W., No. 1 Wilmington, Los Angeles	4- 5-13	2,697	sd. sh. drlg.
Leal, G. V., No. 2 Wilmington, Los Angeles Co.	5- 5-13	3,373	O.S. drlg.
Macmillan Pet., No. 5-H Wilmington, Los Angeles	32- 4-13	1,180	sd. sh. drlg.
Olympic Ref., No. 4 fee, Wilmington, Los Angeles	33- 4-13	3,315	sd. sh. drlg.
Pac. Western, No. 3 Patten, Wilmington, Los Angeles	32- 4-13	2,394	sd. sh. drlg.
Pac. Western, No. 1 Thiele, Wilmington, Los Angeles	33- 4-13	2,849	flow. 310 b.d.
Pongratz, Gus, No. 1-B Wilmington, Los Angeles Co.	32- 4-13	2,623	sd. sh. drlg.
Royalty Service, No. 1-A-SF Wilmington, Los Angeles	33- 4-13	3,620	flow. 390 b.d.
Royalty Service, No. 1 Ollar, Wilmington, L. Angeles	32- 4-13	2,631	sd. sh. drlg.
Royalty Service, No. 1-D Wilmington, Los Angeles	33- 4-13	2,658	sd. sh. drlg.
Royalty Service, No. 16-5-1 Wilmington, Los Angeles	32- 4-13	3,622	reaming
Royalty Service, No. 25-8-1 Wilmington, Los Angeles	33- 4-13	2,312	sd. sh. drlg.
Selegna Eastern, No. 5 Wilmington, Los Angeles Co.	33- 4-13	3,630	sd. sh. drlg.
Sovereign Oil, No. 4-A Wilmington, Los Angeles Co.	33- 4-13	3,632	rig. to pump
Union Pacific, No. 16 Wilmington, Los Angeles Co.	34- 4-13	3,670	flow. 565 b.d.
Union Pacific, No. 23 Wilmington, Los Angeles Co.	4- 5-13	3,450	flow. 2,024 b.d.
Union Pacific, No. 25 Wilmington, Los Angeles Co.	33- 4-13	3,455	sd. sh. drlg.
Union Pacific, No. 28 Wilmington, Los Angeles Co.	4- 5-13	2,875	sd. sh. drlg.
Union Pacific, No. 29 Wilmington, Los Angeles Co.	4- 5-13	2,653	sd. sh. drlg.
Union Pacific, No. 31 Wilmington, Los Angeles Co.	34- 4-13	2,562	reaming
Union Pacific, No. 33 Wilmington, Los Angeles Co.	33- 4-13	2,675	reaming
Union Pacific, No. 1-C Wilmington, Los Angeles Co.	33- 4-13	3,139	sd. sh. drlg.
Wilbur, V.R.G., No. 1-SF Wilmington, Los Angeles	28- 4-13	629	sd. sh. drlg.
Wilbur, V.R.G., No. 3-M Wilmington, Los Angeles	33- 4-13	1,992	sd. sh. drlg.
Sunset Oil, No. 1 Manhattan, Los Angeles Co.	19- 3-14	5,741	cleaning out
Julian, C. A., No. 1 Koch, Walnut, Los Angeles Co.	5- 2-9	1,876	idle
Richfield Oil, No. 2 Ciocca, Montebello, Los Angeles	5- 2-11	5,460	sd. sh. drlg.
Richfield Oil, No. 1 Estrada, Montebello, Los Angeles	5- 2-11	5,657	P.B. 5,540
Texas Co., No. 17 Baldwin, Montebello, Los Angeles	6- 2-11	6,497	sd. sh. drlg.
Texas Co., No. 21-F Long Beach, Los Angeles Co.	19- 4-12	4,750	bailing
Texas Co., No. 3 Flower, Long Beach, Los Angeles	19- 4-12	4,350	sd. sh. drlg.
Mitchell, A. D., No. 3 Plymouth, L. Beach, L. Angeles	19- 4-12	3,240	redrlg. 1,990
Shell Oil, No. 14 Cresson, Long Beach, Los Angeles	19- 4-12	3,380	rig. to pump
Richfield Oil, No. 5 Frye, Long Beach, Los Angeles	19- 4-12	3,595	cleaning out
Coastal Oil & Gas, No. 1 Signal, L. Beach, L. Angeles	19- 4-12	3,815	sd. sh. drlg.
Clayton, G. L., No. 1 North Long Beach, Los Angeles	32- 3-12	5,005	cleaning out
General Pet., No. 27 Santa Fe Springs, Los Angeles	5- 3-11	4,796	rig. to pump
Union Oil, No. 100 Santa Fe Springs, Los Angeles Co.	6- 3-11	10,789	fish. D.P.
Texas Co., No. 7-W Santa Fe Springs, Los Angeles Co.	6- 3-11	1,952	sd. sh. drlg.
Wales Pet., No. 1-H Monterey Park, Los Angeles Co.	26- 1-12	2,131	sd. sh. drlg.
Tide Water A. O., No. 16-B Seal Beach, Orange Co.	11- 5-12	5,880	sd. sh. drlg.
Wilshire Oil, No. 1-A Huntington, Orange Co.	2- 6-11	953	sd. sh. drlg.
Tide Water A. O., No. 41 M. K., Huntington, Orange	2- 6-11	4,050	redrlg. 3,272
W. P. R. Oil, No. 3 Huntington, Orange Co.	35- 5-11	4,785	sd. sh. drlg.
Orco Oil, No. 5 Huntington, Orange Co.	2- 6-11	5,230	sd. sh. drlg.
Standard Oil, No. 14 Thomson, Huntington, Orange	12- 6-11	3,820	pump. 384 b.d.
Commander Oil, No. 1 Newport, Orange Co.	29- 6-10	7,905	cmtd. 5,500
Shell Oil, No. 4-1 Columbia, Olinda, Orange Co.	9- 3-9	4,185	sd. sh. drlg.
Cox, M. A., No. 1 East Coyote, Orange Co.	15- 3-10	5,450	P.B. 4,990
Bartholomae Oil, No. 4 East Coyote, Orange Co.	22- 3-10	5,056	bailing
Dolicia Oil, No. 3 A.U.W., East Coyote, Orange Co.	24- 3-10	3,253	sd. sh. drlg.
Kelly, Thomas, No. 11 East Coyote, Orange Co.	24- 3-10	3,725	pump. test
Union Oil, No. 20 Hole, East Coyote, Orange Co.	22- 3-10	5,371	cleaning out
Standard Oil, No. 2-25 Kraemer, Richfield, Orange Co.	29- 3-9	4,100	hd. sh. drlg.
Arrowhead Oil, No. 1 Bradford, Richfield, Orange Co.	29- 3-9	3,435	pump. 50 b.d.
Bachman Pet., No. 1-K Richfield, Orange Co.	29- 3-9	4,625	pump. 20 b.d.
Joseph, Arthur, No. 1 Richfield, Orange Co.	29- 3-9	3,740	P.B. 3,085
Union Oil, No. 14 Stern, Richfield, Orange Co.	33- 3-9	3,255	sd. sh. drlg.
Richfield Consd. Oil, No. 1 Yorba, Orange Co.	22- 3-9	1,761	rig. to pump
Signet Oil, No. 1 Yorba, Orange Co.	21- 3-9	1,798	br. sh. drlg.
West American Oil, No. 1 Tustin, Orange Co.	14- 5-9	5,701	hd. sd. drlg.

KANSAS

Week Ending July 10 (Descriptions are East unless marked otherwise)

Barber County

Barbara Oil Co. No. 1-27 Holmes, C NW NW sec. 27-33-13w. Viola 4,824½-28 ft.; T.D.; S.S.O.; set 7-in. 4,482 ft.

Pryor & Lockhart No. 1 Gant, C SE sec. 7-31-13w. Viola 4,435-38 ft.; acd.; pot. 1,351 B.O.

W. I. Southern, Inc., No. 1 Davis, SE SE NE sec. 24-34-15w. Drlg. 3,035 ft.

Barton County

S. E. Bailey No. 1 Hammeke, NE NE SW sec. 12-18-12w. Sil. 3,415-27 ft.; 1,200 ft. O.I.H. in 15 hrs.

J. B. Hanna No. 1 Luce, SW cor. sec. 21-20-13w. Drlg. 2,520 ft.

Helmerich & Payne et al No. 1 Sessler, SW SW SE sec. 29-20-1w. T.D. 80 ft.; pipe froze.

Sam Murphy No. 1 Beck, NE cor. sec. 17-17-12w. Anhy. 760 ft.; drlg. 1,480 ft.

Republic Nat. Gas Co. and Continental Oil Co. No. 1 Moeder, NE NE SW sec. 25-17-13w. Sil. 3,370 ft., S.W.; T.D. 3,-440 ft. S.D.

Shell Pet Corp. No. 1 Schneider, CNL S½ SE sec. 12-16-14w. Sil. 3,323 ft.; D.S.T. 3,347 ft.; 120 ft. W.I.H. and 45 ft. O.I. H. in 30 min.

Stanolind No. 1 Schartz, NW cor. sec. 33-19-11w. Sil. 3,328 ft.; set 7-in. 3,330 ft.; R.U.S.T.

Butler County

Kahn et al No. 1-A Madden, SW SW NE sec. 27-23-4. K.C. 2,065 ft.; T.D. 2,212 ft.; pot. 30 B.O. with 60 B.W.

Simpson Oil Co. et al No. 1-A Dennis, NE NE SW sec. 15-26-6. Miss. 2,790 ft.; H. F.W. 2,950 ft.; drlg. 2,995 ft.

Maurer & Saco Oil Co. No. 1 Connell. NE NE SW sec. 27-29-5e. Drlg. 2,215 ft.

Chase County

California-Illinois-Kansas Oil Co. No. 1 Hughes, SW NW SE sec. 13-22-9e. Drlg. 300 ft.

Chautauqua County

C. L. Brosius et al No. 1 Garrett, NW SW NW sec. 26-32-11. Drlg. 843 ft.

Robinson et al. No. 1 Foster, SW cor. sec. 6-33-12. S.O.&G. 1,780 ft.; drlg. 1,810 ft.

Cowley County

B. B. Blair et al No. 1 Miller, NE NW SW sec. 14-32-5. T.D. 3,145 ft.

Lewis Prod. Co. No. 1 Feaster, SE NE SW sec. 36-32-5. Drlg. 375 tf.

McCoy et al No. 1 Anderson, SE NW NE sec. 34-34-6. T.D. 3,055 ft.; D.&A.

Palmer et al No. 1 Ogrosky, SE SE NW sec. 31-32-5. T.D. 3,161 ft.; D.&A.

Trees Oil Co. No. 1 Hornbeck, NW cor. sec. 5-33-4. H.F.W. 2,180 ft.; drlg. 2,-226 ft.

E. Wakefield No. 1 Powers, NW SW NW sec. 8-32-6. Drlg. 1,735 ft.

Elk County

Morgan et al No. 1 Cook, NW cor. sec. 29-30-12. Drlg. 563 ft.

Republic Nat. Gas Co. No. 1 Glasscock, SE NE SW sec. 19-31-11. T.D. 2,269 ft.; D.&A.

Tyrrell No. 1 Sellars, SE cor. sec. 11-31-9. O.W.D.D.; T.D. 2,322 ft.; est. 75 B.O. P.D.

Ellis County

Austin Drlg. Co. No. 1 Karlin, NW cor. sec. 13-12-18w. Spd. and S.D.

Billings No. 1 Smith, SE SE NW sec. 14-12-16w. Sil. 3,356 ft.; first oil 3,360-64 ft.; T.D. 3,370 ft.; rebidg. rig.

Empire O. & R. Co. No. 1 Hall, NE cor. sec. 14-11-17w. Anhy. 1,015 ft.; drlg. 1,648 ft.

J. J. Muth No. 1 Penney, NW SE SE sec. 29-14-18w. S.D. 315 ft.

C. E. W. Skiles et al No. 1 Jensen, SW SE NE sec. 26-12-18w. S.D. 210 ft.

Vickers Pet. Co. et al No. 1 Parker, C N½ NE NW sec. 35-11-16w. Anhy. 875 ft.; H.F.W. 2,160-65 ft.; rng. 8-in.

Earl Wakefield et al No. 1 Burnett, NW NW NE sec. 1-11-18w. Anhy. 1,310 ft.; set 8-in. 2,503 ft.; drlg. 2,555 ft.

Western Kansas O. & R. Co. and Aylward Prod. Co. No. 1 Schmeidler, NW cor. sec. 22-12-17w. Drlg. 225 ft.

Grant County

Kuhn Bros. No. 1 Alderman, C SW sec. 18-29-35w. Drlg. 918 ft.

Greenwood County

Ward McGinnis et al No. 1 Henly Estate SW cor. sec. 25-25-9. T.D. 2,234 ft.; H. F.W.; P.B.

Western Kansas O. & R. Co. No. 1 Taylor. SE SE SW sec. 6-27-12. S.D. 1,300 ft.

Hamilton County

Denver Prod. & Ref. Co. No. 1 Porter. SW SW NE sec. 30-25-41w. Drlg. 4,-750 ft.

Harper County

Magnolia Pet. Co. No. 1 Freeman, SE NW SW sec. 3-31-6w. K.C. 3,468 ft.; drlg. 3,684 ft.

Harvey County

Bell O. & G. Co. et al No. 1 Austin, SE NE NE sec. 28-23-1e. Drlg. 2,020 ft.

E. I. Shaffer et al No. 1 Epp, SE cor. sec. 15-23-3w. Drlg. 2,489 ft.

Simpson & Noble et al No. 1 Pierce, SW SE NE sec. 25-22-2w. T.D. 2,814 ft.; U.R. 8-in.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. T.D. 519 ft.; fsg.

Kiowa County

Stanolind Oil & Gas Co. and Amerada Pet. Corp. No. 1 Pyle, Jr., C NW NE sec. 8-29-16w. Drlg. 3,521 ft.

Marion County

Western Kansas O. & R. Co. et al No. 1 Suderman, SE SW NW sec. 22-20-2e. Spd.

McPherson County

C. E. Ash Drilling Co. No. 1 Broman, NE NE NW sec. 19-17-4w. Rig.

Bradley Bros. No. 1 Barnholt, SW SW SE sec. 30-30-5w. Chat 3,292 ft.; T.D. 3,333 ft.; P. 92 B.O. in 3 hrs.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. H.F.W. 1,870 ft., T.D.; S.D. for water well.

Smith et al No. 1 Larson, NW NW SW sec. 35-18-5w. S.D. 3,500 ft.

Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. Drlg. 1,250 ft.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. Rng. 5-in. 3,524 ft.

Ness County

Jones & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. S.D. 540 ft.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Inc. oil 4,400-02 ft.; 3,500 ft. O.I.H. at 4,406 ft.; S.D.

Pawnee County

Simpson Oil Co. No. 1 Hewson, SE SE SW sec. 13-21-17w. Anhy. 1,035 ft.; Topeka 3,115 ft.; T.D. 3,896 ft.; D.&A.

Pratt County

Atlantic Ref. Co. et al No. 1 Runyon, SW NW NE sec. 11-27-13w. K.C. 3,735 ft.; T.D. 3,931½ ft.; acd.; rainbow oil and 3 B.W.P.H.

Reno County

Carter Oil Co. et al No. 1 Bontrager, C E½ NE NE sec. 26-24-5w. Chat 3,355-65 ft.; set 7-in. 3,360 ft.; drlg. cmt.

Rice County

Bell O. & G. Co. et al No. 1 Wilkins, NW NW NE sec. 23-21-9w. Simp. 3,591 ft.; Sil. 3,643 ft.; T.D. 3,662 ft.

Comanche Oil Co. No. 1 Cramm, SW SW SE sec. 15-19-9w. Pay 2,946-47 ft.; acd.; P. 660 B.O. in 24 hrs.

Gillispie et al No. 1 Strong, NE NE NW sec. 9-18s-8w. R.U.

John Hanna et al No. 1 Marshall, NE NW NW sec. 30-18s-8w. Spd.

Hipple et al No. 1 Wernet, NE NE NW sec. 11-20-6w. Bartv. 3,287 ft.; U.R. 6-in. 3,510 ft.

H. V. Holland et al No. 1 Brothers, SE cor. sec. 12-21-7w. Drlg. 1,775 ft.

Phillips et al No. 1 Hubenett, SW NW SW sec. 23-20-6w. Set 5-in. to 3,334 ft.; P. 207 B.O. in 13 hrs.; to acd.

E. W. Skiles et al No. 1 Heimer, NW NW NE sec. 7-19-18w. Set 6-in. 3,265 ft.; C.O. 3,274 ft.

W. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. Fsg. 2,345 ft.

Rooks County

Basin Oil Co. No. 1 Baxa, NE cor. sec. 23-9-17w. T.D. 3,630 ft.; D.&A.

Brunson Drlg. Co. et al No. 1 Casey, SE SE NE sec. 22-9s-16w. Set 5-in. 3,555 ft.; Cong. 3,570 ft.; drlg. 3,647 ft.

C. R. Craft et al No. 1 Ziegler, NE NE SW sec. 8-10-16w. Topeka 2,850-60 ft.; R.U. S.T.

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. S.D. 3,326 ft.

C. Hoel et al No. 1 Ives, SW SW NE sec. 11-7-18w. 3 B.W. 2,990-3,000 ft.; set 6-in. 3,115 ft.; drlg. 3,390 ft.

H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Fsg. 3,818 ft.

Rush County

Carter Oil Co. et al No. 1 Prosch, C N½ N½ SE sec 21-18-16w. T.D. 3,614 ft.; 18,000,000 ft. gas; comp.

Crawford et al No. 1 Jones, NW cor. sec. 35-17-16w. Set 15-in. 325 ft.; W.O.C.

Douwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Sil. 3,492-95 ft.; 1,500 ft. sulfur water in hole in 2½ hrs.; T.D. 3,512 ft.; S.D.O.

A. Murphy et al No. 1 Roth, NW NW SW sec. 21-16-18w. K.C. 3,292 ft.; set 5-in. 3,293 ft.; drlg. 3,400 ft.

Westgate-Greenland Oil Co. et al No. 1 Greenwalt, NW NW NE sec. 19-19-16w. T.D. 4,017 ft.; P.B. 3,777 ft.; D.&A.

Russell County

Aviward et al No. 1 Jones SE SE NW sec. 23-14-13w. T.D. 3,230 ft.; D.&A.

Billings et al No. 1 Hall, NE NE SE sec. 21-14-14w. Anhy. 845 ft.; K.C. 3,008 ft.; S.O. 3,030-35 ft.; T.D. 3,055 ft.; acd.; pot. 464 B.O.; comp.

Boyle & Grossman No. 1 Deines, SE SE SW sec. 36-15-15w. Sil. 3,451 ft.; H.F. W. 3,471-76 ft.; T.D. 3,179 ft.

Boyle & Grossman No. 1 Steinert Est., NE SE NW sec. 34-15-15w. Set 8-in. 2,820 ft.; drlg. 2,880 ft.

Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

Scott County

Olson Drlg. Co. et al No. 1 Nolan, NW NW NE sec. 13-19-33w. Drlg. 4,999 ft.

Sedgwick County

E. H. Moore, Inc., et al No. 1 Waco, SW SW NW sec. 29-29-1e. Drlg. 2,073 ft.

Roxana Drlg. Co. et al No. 1 Woodman, SW NW SW sec. 26-26-1w. S.D. 2,469 ft.

Ryan Cons. Co. et al No. 1 Williams, NW NW SE sec. 17-25-2w. Simp. 3,927 ft.; cd. 3,934-38 ft.; good S.O.; circ. 3,941 ft.

E. B. Shawver No. 1 Furman, SW NE SE sec. 24-29-3w. Set 6-in. 3,324 ft.

Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. Drlg. 330 ft.

Stafford County

Atlantic Ref. Co. No. 1 Kachelman, SE NW NW sec. 13-25-14w. Sil. 4,324 ft.; T.D. 4,340 ft.; D.&A.

Rose Spring Drlg. Co. et al No. 1 Gray, NW cor. sec. 11-24-13w. Viola 3,483 ft.; S.O. 3,846-50 ft.; set 7-in. csg. 3,843 ft.

Sumner County

John Burton et al No. 1 Springate, NE NE sec. 30-32-1w. Drlg. 940 ft.

Douglass & Gear No. 1 Strickler, SW NW NE sec. 30-32-1w. Drlg. 515 ft.

Faulkner et al No. 1 Nevitt, NE NW NE sec. 36-32-2e. P.B. 3,570 ft. to 2,782 ft.; pmpd. 2½ B.O. and 2½ B.W.P.H.

Gilmac Oil Co. et al No. 1 Proud, SW SE SE sec. 33-30-1w. Wilcox 3,968 ft.; T.D. 4,102 ft.; D.&A.

Graham et al No. 1 Dawson, NW NW NW sec. 4-33-2w. Base Miss. 4,250 ft.; S.D. 4,255 ft.

Trego County

W. I. Southern, Inc., No. 1 Latimer, NW NW SE sec. 19-15-22w. U.R. 7-in. 4,315 ft.

F. L. Thorn et al No. 1 Dix, SE SE SW sec. 31-14-24w. Andy. 1,715 ft.; drlg. 3,188 ft.

Turner et al No. 1 Rogers, C SW sec. 3-15-23w. Anhy. 1,650 ft.; drlg. 4,015 ft.

Woodson County

M. B. Allen No. 1 Flack, NE NE NW sec. 1-26-14. Sd. 1,313-42 ft.; T.D. 2,300,000 ft. gas.

B. & B. Oil Co. No. 1 Lockard, NW NW NE sec. 2-26-13e. Drlg. 1,040 ft.

Morris et al No. 1 Koening, SE SE NW sec. 35-24-15. T.D. 1,231 ft.; S.D.

Fred Rapp No. 1 Houghland, NW NW SE sec. 2-25-15. Drlg. 600 ft.

Pontotoc County

Boettcher O. & G. Co. No. 1 Cann, SE NW NE sec. 25-4n-7e. Crom. 2,835 ft.; T.D. 3,170 ft.; S.D.

Clark Drlg. Co. et al No. 1 Richardson, SE SE NW sec. 30-4-8. Mayes 3,730 ft.; Woodford 3,812 ft.; Hunton 3,920 ft.; drlg. 4,065 ft.

W. A. Delaney et al No. 1 Payton, NE NE SE sec. 1-4-7. O.W.D.D.; Crom. 2,648 ft.; drlg. 3,245 ft.

Norbla Oil Co. No. 1 Kennedy, SE SE NE sec. 13-2-5. Drlg. 1,031 ft.

Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. Viola 2,595 ft.; T.D. 2,840 ft.; run Schlumberger; S.D.O.

Roodhouse et al No. 1 Booth, SE NW SE sec. 20-2-6. Bromide 4,821 ft.; cd. 4,961-66 ft.; salty; to P.B.

Southern Oil Co. No. 1 Young, NE NE SE sec. 17-3-7. H.F.W. 820 ft.; T.D. 840 ft.; lowering csg.

Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. Drlg. 1,123 ft.

Pottawatomie County

Atlantic Ref. Co. No. 1 Dooley, SE SE SW sec. 9-11-5. Sylvan 4,746 ft.; Viola 4,839 ft.; Dense 4,863 ft.; Dol. 4,869 ft.; cg.

Mid-Continent Pet. Corp. No. 1 Ne-Thah-Pea-Se, SE SE NE sec. 24-11-4. Earlsboro 3,925 ft.; T.D. 4,225 ft.; D.P. stuck.

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Billington-B, SW SE SW sec. 32-9-3e. 2nd Wilcox 5,316 ft.; T.D. 5,321 ft.; swb. 10 B.O. and 1½ bailers water an hr.; to P.B.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. Drlg. 2,500 ft.

SOUTHERN OKLAHOMA

Carter County

Shell Pet. Corp. No. 1 Smith, NW SE NE sec. 30-5s-1e. T.D. 4,222 ft.; S.D.O.

Coal County

Carter Oil Co. No. 1 Clayton, C W½ NE SW sec. 27-2n-9e. Bldg. rig.

Comanche County

Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4n-11w. Drlg. 2,793 ft.

Cotton County

Indian Territory Illuminating Oil Co. No. 1 Collins, NE cor. sec. 18-4s-10w. Drlg. 100 ft.

Jackson County

Ace Gutowsky No. 1 Booker, NW cor. sec. 33-2n-18w. T.D. 510 ft.; S.D.

Ace Gutowsky No. 1 Howard, NE SW NW sec. 10-3n-19w. T.D. 891 ft.; S.D.O.

E. L. Lippert et al No. 1 Miller, NW cor. sec. 4-2n-18w. Spd.; S.D.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. S.D. 1,165 ft.

Jefferson County

Massad & Swansberger No. 1 Barrett, NE cor. SE SE sec. 14-6s-6w. T.D. 1,842 ft. S.D.

Love County

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft. P.B. 6,927 ft.; F. 85 B.O. in 24 hrs. while running tubing.

McCurtain County

Wilcox O. & G. Co. No. 1 Neuman, SW SE SW sec. 30-7s-23e. Set 12½-in. 537 ft.; sd. 545-50 ft., H.F.W.; drlg. 560 ft.

Marshall County

Neff-Godfrey No. 1 Chapman, SW SE SW sec. 36-4s-4e. T.D. 127 ft.; reprg. pump. drlg. 950 ft.

Stuart & Taylor No. 1 Chestnut, NE cor. sec. 23-8s-5e. T.D. 782 ft.; S.D. for tractor.

Murray County

O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. Bromide sd. 2,570-74 ft. T.D.; S.D.

Power Oil Co. No. 1 Lancaster Trust, C SW NE sec. 10-1s-2e. T.D. 3,438 ft.; P.B. 3,175 ft.; bldg. drk.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. Sd. 3,049-50 ft., S.O.; drlg. 3,345 ft.

Stephens County

Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. Cd. 6,883-93 ft., rec. shale and dol., S.O.; drlg. 6,947 ft.

Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. Drlg. 7,399 ft.

Helmerich & Payne No. 1 Graham, SW SW NE sec. 12-1n-5w. T.D. 5,014 ft. Per. csg. 3,784-3,800½ ft.; F. 410 B.O. in 24 hrs.; comp.

Ed Parsons No. 1 Blake, C SW NW sec. 22-2n-8w. T.D. 4,674 ft.; drill pipe stuck.

Tillman County

Cavens et al No. 1 Southerland, SW SW NW sec. 35-4s-16w. R.U. and S.D.

Magnolia Pet. Co. No. 1 Brown, SW SE NE sec. 21-3s-18w. Canyon 3,480 ft.; Strawn 4,335 ft.; drlg. 6,145 ft

Tom Walker No. 1 Bowman, SW SW NW sec. 10-4s-17w. T.D. 20 ft.; S.D.

OKLAHOMA

Week Ending July 10

NORTHERN OKLAHOMA

Alfalfa County

Nason Drlg. Co. et al No. 1 Acre, C SW NE sec. 14-24-11w. O.W.P.B.; T.D. 7,332 ft.; hole junked at 4,278 ft.; D.&A.

Beckham County

Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. Drlg. 2,129 ft. in dolomite.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. Drlg. 5,200 ft.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9?2w. T.D. 7,178 ft.; fshg.

Creek County

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. T.D. 3,002 ft.; H.F.W.; S.D.

Garfield County

Ohio Oil Co. No. 1 State, SW cor. sec. 13-23-3w. T.D. 5,200 ft.; D.&A.

Garvin County

Nels Burton et al No. 1 Burch, SE SE SW sec. 3-3n-1w. Drlg. 3,030 ft.

Carter Oil Co. No. 1 Potts, C E¼ SE NW sec. 36-1n-3w. Sycamore 895 ft.; drlg. 1,124 ft.

Grady County

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Drlg. 3,490 ft.

Grant County

Carter Oil Co. et al No. 1 Crisman, C W½ SW NW sec. 16-25-3w. Chat 4,856 ft.; drlg. 4,866 ft.

Carter Oil Co. et al No. 1 Kolarik, NW SW sec. 4-26-5w. Drlg. 5,198 ft.

Haskell County

Continental Oil Co. No. 1 Ferguson, SW SE NE sec. 33-8-20. Sandy lime 5,546 ft.; drlg. 5,556 ft.

Hughes County

W. O. Allen No. 1 Barnard, SW cor. sec. 24-8-8. Drlg. 1,500 ft.

C. E. Beal No. 1 Eason, NE NE NW sec. 7-9-11. Wapa. 2,983 ft.; Cromwell 3,017-35 ft.; T.D. 3,460 ft.; S.D. for water.

Carter Oil Co. No. 1 Hamilton, C W½ NE SW sec. 33-4-9. Sylvan 5,474 ft.; drlg. 5,885 ft.

E. H. Moore, Inc., No. 1 Buck, NW SW SW sec. 21-8-10. T.D. 2,903 ft.; pulling 8-in. csg.

Moroney & Healey No. 1 Field, C NW SW sec. 11-9-11. Gilcrease 2,766 ft.; fsg. 2,780 ft.

Texas Co. No. 1 Cox, NE NW NW sec. 23-9-8. Set 13-in. 147 ft.; W.O.C.

Kay County

Black Gold Oil Co. No. 2 Cooley, SW cor. sec. 25-28-4e. Drlg. 1,165 ft.

Kiowa County

Kiowa Oil Corp. No. 1 Finder, C SW NE sec. 4-6-20w. G.W. 936-940 ft.; dry; S.D.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. T.D. 6,515 ft. in Atoka; S.D.O.

Lincoln County

Cimarron Oil Corp. No. 1 Ornor, C SW SE sec. 31-17-2e. Drlg. 2,660 ft.

Ross Oil Co. No. 1 Bailey, SE cor. sec. 22-15-6. Cleveland 2,205-53 ft., T.D.; 2,000,000 ft. gas; comp.

Logan County

Shell Pet. Corp. et al No. 1 Waddle, SW SE NW sec. 36-15-4w. Drlg. 2,490 ft.

Noble County

Herndon Drlg. Co. No. 1 Baggett, SE cor. sec. 13-21-3e. Drlg. 680 ft.

Lincoln Oil Co. et al No. 1-A Neil, NE cor. sec. 15-23-2w. Drlg. 4,985 ft.

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Johnson, NW NW SE sec. 4-20-2w. Wilcox 5,306 ft.; P.B. 5,043 ft.; set whipstock at 5,135 and 5,161 ft.; drlg. 5,240 ft.

Okfuskee County

F. W. Merrick No. 1 Mackey, NE NE SW sec. 29-11-10. Drlg. 415 ft.

Riverland Oil Co. No. 1 Board, NE NW SE sec. 10-13-10. Dutcher 2,708 ft.; at 2,745 ft. F. 50 B.O. in 14 hrs.; drlg. 2,750 ft.

Osage County

Norbla Oil Co. No. 1 Osage, SE cor. sec. 35-23-6. Drlg. 950 ft.

Pawnee County

Carter Oil Co. No. 1 Wells, C E½ SE NW sec. 30-23-5. Drlg. 2,040 ft.

ARKANSAS

Ashley County

Phillips Pet. Co. No. 1 Godfrey, C S½ SW NW sec. 18-17-9. 13-in. cmtd. 1,153 ft.

Clark County

W. M. Martin No. 1 Coke, NW sec. 14-10-20. T.D. 1,690 ft.; S.D.; W.O.

Cleveland County

Tex-Canadian Dev. Co. No. 1 J. E. Moore, sec. 22-9s-10w. T.D. 3,819 ft.; D.&A.

Columbia County

Robt. Keene et al No. 1 Runyon, NW SE NE sec. 1-16s-21w. 13-in. cmtd. 90 ft.

Crittendon County

Stanley Oil Corp. No. 1 Danner, C sec. 18-8n-9e. Drlg. 300 ft.

Hempstead County

Shephard & Toud et al No. 1 Smith, NW SW SE sec. 11-11-25. S.D. 1,926 ft.

Little River County

M. E. Sanderson No. 1 Pinning, sec. 6-13-30. T.D. 1,300 ft.; D.&A.

Lonoke County

Frank F. Silver No. 2 Chambers, sec. 17-2n-7w. Cg. oil sd. 1,495-1,500 ft.; arg. test.

McClanahan et al No. 3 Capps, NE NW SE sec. 11-20-28. Drk.

Roberts Drlg. Co. No. 1 W. W. Capps, SE NW SE sec. 10-20-28. Drk.

Miller County

E. H. Moore No. 2 Dale, 660 ft. N and W. C sec. 24-15-26. T.D. 7,310 ft.; S.D.; W.O.

Standard Oil Co. No. 1 Sarah Harvey, SW SW SW sec. 33-16s-26w. Drlg. 5,743 ft.

Miller County—Rodessa

Allred & Allred No. 1 E. A. Rector, SE W½ W½ sec. 16-20-28. Drk.

F. W. Burford No. 1 A. A. Capps, W½ sec. 14-20-28. Drlg. 100 ft.

F. W. Burford No. 1 Easton, E½ SW SE sec. 11-20-28. R.U.

F. W. Burford No. 1-B Gerald, NE cor. sec. 15-20-28. 13-in. cmtd. 207 ft.

F. W. Burford No. 1 Perdue, SE NE SE sec. 11-20-28. R.U.

Burnham & Manley No. 1 E. A. Rector, SE sec. 17-20-28. Drk.

Tony DeGrazier No. 1 E. A. Rector, SE cor. sec. 17-20-28. Drk.

H. L. Hunt No. 1 Wommack, SE sec. 10-20-28. M.I.M.

W. M. Layton No. 1 Terry, NW cor. sec. 14-20-28. Drlg. 1,504 ft.

McClanahan et al No. 2 A. A. Capps, SW sec. 11-20-28. R.U.

Monroe County

J. H. Coker No. 1 McClain, NE NW sec. 15-4n-2w. R.U.

Nevada County

Benedum & Trees No. 1 Grove, sec. 10-14-20. P.B. from 6,133 ft. to 2,175 ft.; W.O.C.S.

St. Francis County

Manning & Martin No. 1 R. C. Gregg, sec. 20-5n-5e. Drlg. 1,500 ft.

Ouachita County

Copenhaver Oil Corp. No. 1 J. E. Evans, sec. 20-11-19. S.D.; T.D. 757 ft.

New MAC
PLUNGER BARREL
for 2-inch tubing

Outlasts three ordinary barrels, as Steel Plunger works in and out of Cast Iron Barrel as much as 2 feet on the up and down stroke and more if desired, thus flushing itself free of sand or gypsum.

Reversible Valve Body and Plunger make for lowest upkeep.

Furnished with 2-Cup Standing Valve and with, or without, Garbutt Rod.

Save, with the New "MAC"!

Ask for complete details and price list.

McGREGOR
WORKING BARREL COMPANY
Bradford, Pa., U.S.A.

Union County—Schuler

E. M. Jones et al No. 1 First Natl. Bank NW NE NE sec. 19-18-17. Drlg. 5,240 ft.

E. M. Jones et al No. 1 K. Gallagher, NW SW sec. 19-18-17. R.U.

E. M. Jones et al No. 1 Marine Oil Co. fee. NW SW SE sec. 17-18-17. R.U.

Ed. M. Jones et al No. 1 C. H. Murphy. NW Lot 6, NW¼ sec. 19-18-17. Drlg. 3,150 ft.

Ed. M. Jones et al No. B-1 Murphy Land Co., SW SE NE sec. 13-18-18. Drlg. 4,020 ft.

Lion Oil Rfg. Co. No. A-1 M. D. Justiss, NE NW NE sec. 19-18-17. Drlg. 4,101 ft.

Lion Oil Co. No. B-1 Edna Morgan, SW NW SE sec. 18-18-17. Comp.; 33 B.P. H. flwg.; T.D. 5,738 ft.

Lion Oil Ref. Co. No. 2-A Edna Morgan, NW NE SW sec. 18-18-17. Drlg. 4,750 ft.

Lion Oil Ref. Co. No. 3-A Edna Morgan SE Lot 1, SW sec. 18-18-17. 10-in. cmtd. 765 ft.

Lion Oil Ref. Co. No. 2-B Morgan, NE NW SE sec. 18-18-17. Cg. 5,510 ft.

Marine Oil Co. No. 1 fee, NW SW SW sec. 17-18-17. Drlg. 4,550 ft.

Marine Oil Co. No. 1 E. M. Jones, SW NW SW sec. 17-18-17. Drlg. 3,101 ft.

Phillips Pet. Co. No. 1 E. Gan, SW SE NE sec. 18-18-17. Drlg. 3,120 ft.

Phillips Pet Co. No. 2 E. Gan, SE SW NE sec. 18-18-17. Cg. 5,584 ft.

Phillips Pet. Co. No. 1 M. Justiss, SE Lot 6, NW sec. 18-18-17. Cg. 5,584 ft.

Phillips Pet. Co. No. 2 M. Justiss, NE Lot 2, SW sec. 18-18-17. Drlg. 5,292 ft.

Alice Sydney Oil Co. No. 1 Pewledge Est., SW SW SE sec. 7-18-17. Cg. 5,688 ft.

Alice Sydney Oil Co. No. 2 Morgan, sec. 18-18-17. Drlg. 4,470 ft.

Union County—Other

Sklar Oil Corp. No. 1 W. T. Fitzgerald. SW NW SW sec. 8-18-15. 7-in. cmt. 2,098 ft.; W.O.S.R.; T.D. 2,140 ft.

W. D. Wingfield et al No. 1 So. Kraft Corp., SW NE sec. 18-16-14. T.D. 3,636 ft.; S.D. rig repair.

Red Iron Drlg. Co. No. 1 Aycock, NW sec. 6-20-4. R.U.

Red River Parish

John Droppleman No. 1 Wilson, SW sec. 23-13-11. Cmtd. 7-in. 2,500 ft.

Glassell & Whitehurst No. 1 LeLong, NE NW NE sec. 25-12-11. 13-in. cmt. 250 ft.

Perla Oil Co. No. 1 DeLong, 330 ft. S and E, C sec. 23-12-10. Drlg. 1,842 ft.

J. C. Prine No. 1 Haynes, SW sec. 20-13-10. 7-in. cmtd. 974 ft.; tstg. S.W. 978 ft.

J. D. Wadley No. 1 McClelland, SE NE sec. 24-13-11. Tstd. dry; T.D. 2,550; W.O.

Yandell & Rogers No. 4 Caspari, SW SE SW sec. 27-13-11. Cg. 2,472 ft.

Sabine Parish

Arcadia Ref. Co. No. 2 Henderson, SE sec. 30-9-13. S.D. 800 ft.

Ellis Prod. Co. No. 1 Wright, NW SW sec. 4-5-12. Drlg. 1,485 ft.

Kirk-Green-Way Inc. No. 1 Whitney Corp., NW NE sec. 8-9-13. Drlg. 7,118 ft.

Perla Oil Co. No. 1 Brown, SE SW NW sec. 16-9-13. Comp.; pmp. 5 B.P.D.; T.D. 1,557 ft.

Remine et al No. 1 4-L Co., SW SW sec. 7-5-12. R.U.

Willis & Dowden No. 1 Lynch, SW NE SW sec. 29-9-13. T.D. 1,608 ft.; arg. tst.

Tensas Parish

Ark. Fuel Oil Co. No. 1 Hardwood, SE NW NW sec. 8-11-10e. T.D. 3,080 ft.; D.&A.

Webster Parish

Magnolia No. 2 D. G. Cox, SW SE NE sec. 22-21-10. 7-in. cmtd. 8,200 ft.; T.D. 8,244 ft.; W.O.C.S.

Magnolia Pet. Co. No. 2 G. W. Cole, NE NW NE sec. 27-21-10. Drlg. 7,515 ft.

Magnolia Pet. No. 6 Ira Cox, NE NE SE sec. 23-21-10. Drlg. 7,153 ft.

Magnolia Pet. Co. No. 2 A. J. McCook, SW sec. 22-21-10. Drlg. 5,244 ft.

Ohio Oil Co. No. 47 Bodcaw Acct. 2, SW SE sec. 15-21-10. Drlg. 3,500 ft.

Ohio No. 1 S. P. D. Coyle and W. Cox, SW SW SE sec. 23-21-10. Drlg.

Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drlg. 3,255 ft.

Ohio Oil No. 1 L. M. Gardner, NE sec. 22-21-10. Drlg. 8,155 ft.

Ohio No. 7-B R. L. Holloway, 586 ft. N. 756 ft. E line, sec. 23-21-10. Drlg. 4,890 ft.

A. G. Oliphant et al No. 1 Banks, NE NE sec. 34-21-10. Drlg. 82 ft.

L. R. Skidmore No. 1 Barnett, NE NW SW sec. 29-17-9. T.D. 3,785 ft.; S.D.

Standard Oil of La. No. 1 E. L. Stewart, SE SE SE sec. 32-21-10. Drlg. 7,847 ft.

Woodley Pet. Co. No. A-2 L. C. Cox, SW NE sec. 22-21-10. Drlg. 4,237 ft.

Winn Parish

Georgetown Oil Co. No. 1 Tremont, sec. 19-10-1e. R.U.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

Blackwell O. & G. Co. No. 3 Neugent, sec. 8-23-16. Drlg. 7,000 ft.

Clark Oil Corp. No. 2-A Sharp, SW SE sec. 4-23-16. Drlg. 4,050 ft.

Holcomb & Thomasson No. 1 Dillon, SE sec. 4-23-16. R.U.

J. E. Jones No. 1-A Parker, SW cor. sec. 4-23-16. Tstg.; T.D. 6,027 ft.

R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. T.D. 11,486 ft.; P.B. to test.

R. W. Norton No. 6 Starke, NE sec. 17-23-16. Comp.; flw. 76 bbls. in 4 hrs.; T.D. 5,932 ft.

R. W. Norton No. 11 Starke (a), NE sec. 17-23-16. Drlg. 4,469 ft.

R. W. Norton No. 13 Starke, NW sec. 17-23-16. Drlg. 50 ft.

Roberts Drlg. Co. No. 1 E. G. Finley, NW sec. 1-23-16. R.U.

Standard Oil of La. No. 4 Sarah Kaempfer, NE sec. 9-23-16. Drlg. 5,854 ft.

Standard Oil of La. No. 2 J. W. Farmer, NW sec. 7-23-15. Drlg. 5,598 ft.

Standard Oil of La. No. 1-B Emma J. Parker, SE NE sec. 9-23-16. Drlg. 5,130 ft.

Standard Oil of La. No. 2 O. A. Zylks, NE SE sec. 9-23-16. Drlg. 4,792 ft.

Surf Oil Co. No. 1 Allison, NE sec. 8-23-16. T.D. 6,050 ft.; acdzng.

Surf Oil Co. No. 1 Upchurch, NE sec. 8-23-16. Comp.; flw. 192 B.P.D.; T.D. 6,036 ft.

United Gas No. 8 fee 574, NW cor. sec. 16-23-16. Drlg. 2,519 ft.

United Gas No. 11 Pitts Unit, SE NW sec. 13-23-16. Comp.; flw. 6 B.P.H.; T.D. 6,038 ft.

United Gas No. 4 Starke, SE sec. 8-23-16. Drlg. 4,169 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSota O. & G. Co. No. 1 Ashley, SW SE sec. 15-16-10w. Drlg. 5,456 ft.

Hunt Oil Co. et al No. 1 Bodcaw, SE sec. 30-14-5w. Drlg. 6,682 ft.

Lide & Greer No. 2 Davis, NW NE sec. 12-16-5w. Drlg. 4,970 ft.

McDowell et al No. 1 Locke, NE cor. sec. 9-15-10. Fsg. 2,921 ft.

Bossier Parish

Arkansas-La. No. 2-B Werner, NE cor. sec. 7-17-11. Comp.; 26,568,000 ft. gas; T.D. 5,056 ft.

Producers O. & G. No. 1 R. Johnson, NE sec. 5-17-11. Cg. 5,210 ft.

Triangle Drlg. Co. No. 1 C. Howell, NW sec. 26-17-12. T.D. 5,200 ft.; P.B. and tstg.

United Gas No. 1 S. L. Herold, 660 ft. S and W, NE sec. 31-17-4. T.D. 5,260 ft.; D.&A.

United Gas No. 3 L. Schmitt, NW sec. 14-17-12. Drlg. 4,230 ft.

Caddo Parish

J. G. Abney No. 1 Thigpen & Herold, NW SW sec. 15-21-16. T.D. 1,834 ft.; prep. D.D.

Calatex O. & G. No. 3-A Agurs, SW cor. sec. 6-16-6. Comp.; pmp. 7 B.P.D.; T.D. 2,483 ft.

W. D. Chew No. 2 Standard of La. Comp.; pmp. 40 B.P.D.; T.D. 950 ft.

W. D. Chew No. 4 U. S. Govt. O.W.D.D.; sec. 5-20-16. 4-in. cmt. 2,331 ft.; W.O. C.S.

T. B. Donnell No. 5 Stokeley, SW sec. 5-20-16. T.D. 951 ft.; W.O.S.R.

W. C. Feazel No. 1 Pitts, SE NE sec. 8-23-16. Drlg. 5,259 ft.

C. L. Ferguson et al No. 1 Cooney, sec. 35-21-16. T.D. 1,645 ft.; S.D., rig rep.

Hancock & Uhlman No. 1 Helpman, sec. 16-21-16. T.D. 1,063 ft.; D.&A.

W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. Drlg. 6,400 ft.

Marine Exp. Co. No. 1 Herold, NW sec. 10-21-16. 8-in. 999 ft.; T.D. 1,003 ft.; W.O.C.S.

Orr et al No. 1 Acme Fee, Cen. sec. 15-21-16. 6-in. 998 ft.; T.D. 1,002 ft.; W. O.C.S.

Frank Perkins No. 1 Stiles, SW SW sec. 33-21-16. 5-in. 904 ft.; T.D. 945 ft.; W. O.C.S.

Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. Drlg. 8,036 ft.

J. J. Shulman No. 1 Bickham, NE sec. 28-21-5. 6-in. 1,345 ft.; T.D. 1,645 ft.; W.O.C.S.

Stanolind O. & G. Co. No. 124 Dillon, NW SE sec. 14-21-15. Drk.

Surf Oil Co. No. 1 Hyman, SE sec. 10-20-15. Drlg. 900 ft.

R. G. Trippett & D.C.R.O. No. 1 School Bd., NE sec. 16-19-14. Drlg. 1,610 ft.

Ward DeLaney & Evans No. 1 W. L. Sibley, NW NW SW sec. 15-19-14. R.U.

Claiborne Parish

Atlantic Rfg. Co. No. 2 F. B. King, W½ NE SE sec. 35-21-5. Drlg. 4,930 ft.

Atlantic Ref. Co. No. 3 King, E½ SE SE sec. 35-21-5. Loc.

Atlantic Ref. Co. No. 1 Tatum, N½ NE SE sec. 31-21-4. Loc.

Atlantic Ref. Co. No. 2 Tatum, S½ NE SE sec. 31-21-4. R.U.

Gulf Ref. Co. No. 2 Henry, N½ NW NE sec. 31-21-4. Drlg. 3,522 ft.

Hollifield & McFarland No. 2 M. Patton, W½ SW SE sec. 31-21-4. Drlg. 4,264 ft.

Love Bros. No. 1 J. J. Henry, S½ NE NE sec. 31-21-4. Drlg. 1,577 ft.

Love Bros. No. 2 J. J. Henry, N½ NE NE sec. 31-21-4. Loc.

Lyons & Neely No. 1 Bean, W½ SE NE sec. 31-21-4. Drlg. 4,003 ft.

L. O. McMillian No. 1-A McDonald, E½ NW NW sec. 31-21-4. Drlg. 840 ft.

Magnolia Pet. Co. No. 2 English, S½ SW NE sec. 31-21-4. Comp.; flw. 263 B.P.D.; T.D. 5,281 ft.

Magnolia Pet. Co. No. 3 English, N½ SE NW sec. 31-21-5. 7-in. 5,263 ft.; T.D. 5,283 ft.; W.O.C.S.

Magnolia Pet. Co. No. 4 English, N½ SW NE sec. 31-21-4. R.U.

Magnolia Pet. Co. No. 5 English, N½ NE NW sec. 31-21-4. Loc.

Magnolia Pet. Co. No. 2, H. E. Patton, SW sec. 36-21-5. T.D. 5,310 ft.; tstg.

C. R. Schuster et al No. 2 M. S. Patton, S½ NW NE sec. 1-20-5. Cg. 5,298 ft.

Scouts Oil Co. No. 2 R. Vaughn, W½ NE NW sec. 36-21-5. Drlg. 4,950 ft.

Sells Pet. Co. No. 1 W. Jones, W½ SE SE sec. 31-21-4. R.U.

Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. T.D. 4,350 ft.; cmtd. surf. csg.

Standard Oil of La. No. 2 F. B. King, et al, NE sec. 35-21-5w. Drlg. 4,510 ft.

J. C. Trippett Drlg. Co. No. 1 Aycock, N½ NE SE sec. 1-20-5. Drlg. 2,650 ft.

United Gas No. 2 Brownfield, 660 ft. N and E, SW NW sec. 5-19-5w. Drlg. 100 ft.

P. W. Woodruff No. 2-B McDonald, N½ NE NE sec. 36-21-5. Comp.; flw. 21 B. P.H.; T.D. 5,277 ft.

P. W. Woodruff No. 1-A McDonald, N½ SE NE sec. 36-21-5. 5-in. cmtd. 5,218 ft.; T.D. 5,250 ft.

De Soto Parish

Grogan Oil No. 1-A Ramsey, sec. 36-11-11. T.D. 2,961 ft.; flw. 184 bbls. 12 hrs.; tstg.

J. F. McMannan No. 1 Cook Ld. Co., SE sec. 16-16-11. S.D. 50 ft.

Arthur D. Robinson No. 1 Allison, NW sec. 17-14-13. Drlg. 48 ft.

Franklin Parish

Jensen & Bailen No. 1 Grayson, NE sec. 36-12-6e. Drlg. 2,265 ft.

Grant Parish

Burkett et al No. 1 Morrison, sec. 10-9-1e. Comp.; pmp. 7 B.P.D.; T.D. 1,539 ft.

Harvey Weir No. 1 Calfax Bk. & Tr. Co., NE NW sec. 15-7n-3w. 10-in. cmtd. 160 ft.; W.O.C.S.

Lincoln Parish

B. O. D. C. and H. D. Easton No. 1 G. W. Dye, NE NE sec. 21-19-4w. T.D. 6,011 ft.; P.B. to 4,745 ft. and tstg.

Crown Central Pet. Co. No. 1 T. F. Patton, N½ SE NW sec. 6-20-4. R.U.

T. L. James No. 1 J. J. Spence, SW NE sec. 11-17-4. Drlg. 1,047 ft.

Lyons & Neely No. 1 Aycock, S½ NW SW sec. 6-20-4. Drlg. 4,200 ft.

Lyons & Neely No. 1 W. H. Patton, N½ SW NW sec. 6-20-4. R.U.

Lyons & Neely No. 1 Effie P. Taylor, S½ NW NW sec. 6-20-4. Comp.; flw. 24 B.P.H.; T.D. 5,368 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Brookshire, sec. 66-12s-3e. 18⅝-in. csg. 237 ft.; 13⅜-in. csg. 2,125 ft.; drlg. sh. 8,380 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc et al No. 1 Wurzlow, sec. 17-22s-18e. T.D. 10¾-in. csg. 1,008 ft.

Texas Co. No. 14 State, sec. 20-22s-18e. T.D. 5,115 ft.; P.B. and sdtrkd.; drlg. sdy. sh. 4,432 ft.

Bayou Cocotris—Terrebonne Parish

Shell Pet. Corp. No. 1 Pelican, sec. 35-17s-15e. T.D. 10,325 ft.; hole cleaned; rmg.

Shell Pet. Corp. No. 2-B Realty Operators, sec. 18-17s-15e. 10¾-in. csg. 2,481 ft.; drlg. sh. 8,813 ft.

Big Lake—Cameron Parish

Union Sulphur Co. No. 1 Henry Hebert, sec. 18-12s-8w. Drlg. brkn. sh. 5,812 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 50 State, sec. 19-23s-20e. T.D. 4,867 ft.; P.B. 3,235 ft. to sdtrk.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 6 School Land, sec. 16-14s-13w. T.D. 4,068 ft.; R.U. to pumn.

Magnolia-Humble O. & R. Co. No. 20 Cameron Meadows, sec. 21-14s-13w. R.U.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 3 Laws Realty Co., sec. 25-12s-9e. T.D. 8,860 ft.; fsg. abd.

Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drk.

Pan American Prod. Co. No. 1 South Coast Corp., sec. 30-13s-10e. T.D. 7,923 ft.; rec. 1,000 ft. of P.L.O. on D.S.T. 7,906-23 ft.; 7-in. csg. 7,906 ft.; T.D. 8,503 ft.; run lnr. to comp.

Pan American Prod. Co. No. 1 Veeder, sec. 30-13s-10e. Spd.

Choctaw—Iberville Parish

Standard Oil Co. No. 10 Grove, sec. 52-9s-11e. Drlg. sd. rk. 4,058 ft.

Standard Oil Co. No. 6 Gay, sec. 52-9s-11e. T.D. 5,490 ft.; sdtrkd.; drlg. rk. 4,659 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 10 Darrow. T.D. 6,920 ft.; P.B. 3,200 ft.; drlg. sh. 5,384 ft.

Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 State, sec. 5-22s-16e. 10¾-in. csg. 1,505 ft.; T.D. 7,231 ft.; P.B. 6,310 ft.; to sdtrk; core sd. 7,010 ft.

Fausse Point—Iberia Parish

Texas Co. No. 3 State, sec. 35-11s-8e. 10¾-in. csg. 1,245 ft.; drlg. sh. and L. 4,103 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. T.D. 5,116 ft.; rmg.

Garden Island—Plaquemines Parish

Texas Co. No. 50 State, sec. 19-23s-20e. Drlg. sdy. L. 3,615 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 18 Castle, sec. 34-10s-12w. T.D. 7,404 ft.; 7-in. csg. 7,253 ft. tstg.; I.P. 375 B.P.D.; ¼-in. ck.

Union Sulphur Co. No. 15 Barbe, sec. 1-9s-8w. T.D. 6,730 ft.: P.B. 3,930 ft.; drlg. sdy. sh. and L. 6,912 ft.

Union Sulphur Co. No. 8 Castle, sec. 13-9s-8w. Spd.

Union Sulphur Co. No. 6 Kaufman, sec. 13-9s-8w. Drlg. 3,712 ft.

Gueydan—Vermilion Parish

Pure Oil Co. No. 6 Mulney Investment Co., sec. 34-11s-1w. 10¾-in. csg, 1,049 ft.; drlg. sd. 3,212 ft.

Hackberry—Cameron Parish

Burton Oil Co. No. 2 Lewis, sec. 22-12s-10w. I.P. 600 B.P.D.; ¼-in. ck.

Burton-Sutton Oil Co. No. 3 Vincent, sec. 22-12s-10w. I.P. 550 B.P.D.; ¼-in. ck.

Emanon Oil Co. No. 1 Porter Ellender, sec. 21-12s-10w. Fsg. at 1,656 ft.

Stanolind O. & G. Co. No. 7 Carter and Sweeney, sec. 22-12s-10w. T.D. 4,322 ft.; I.P. 490 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 1-B Duhon, sec. 27-12s-10w. Drlg. 2,319 ft.

Stanolind O. & G. Co. No. 4 Duhon, sec. 22-12s-10w. 10¾-in. csg. 1,273 ft.; T.D. 4,574 ft.; 7-in. csg. 4,500 ft.; I.P. 286 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 25-B Gulf Land fee, sec. 15-12s-10w. 20-in. csg. 158 ft.; T.D. 7,672 ft.; fsg.

Stanolind O. & G. Co. No. 4 Lacey, sec. 27-12s-10w. R.U.

Stanolind O. & G. Co. No. 19 School Land, sec. 16-12s-10w. 10¾-in. csg. 1,942 ft.; drlg. 2,612 ft.

Texas Co. No. 22-B State, Twp. 12s-9w. Drlg. sh. 7,328 ft.; no report.

Union Sulphur Co. No. 9 Doiron, sec. 37-12s-10w. Drlg. sdy. sh. 4,617 ft.; no report.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 26 Heyd, sec. 40-13s-9e. Drlg. sh. 3,824 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. 9⅝-in. csg. 7,030 ft.; T.D. 9,765 ft.; drill stem stuck.

Herton Oil Co. No. 7 Carter, sec. 38-13s-9e. Drlg. sh. 7,812 ft.

Herton Oil Co. No. 8 Carter, sec. 44-13s-9e. Drlg. 2,730 ft.

Jennings—Acadia Parish

Frank W. Bennett et al No. 1 Brethern and Christ Church, sec. 41-7s-2w. Drlg. 2,412 ft.

W. T. Burton Oil Co. No. 2 J. J. Roboria, sec. 42-9s-2w. Cg. oil sd. 6,809 ft.

Cosmo Pet. Co. No. 1 M. E. Crusel, sec. 42-9s-2w. R.U.

Cosmo Pet. Co. No. 1 Jenning Heywood, sec. 41-9s-2w. Drlg. sh. 2,837 ft.

Glassell No. 3 Trushell, sec. 42-9s-2w Drlg. 2,037 ft.

Louisiana Crusader Oil Co. No. 1 Heywood, Martin Campbell Sur., sec. 42-9s-2w. R.U.

Reiter-Foster Oil Co. No. 1 M. C. Crusel et al, sec. 42-9s-2w. R.U.

Stanolind O. & G. Co. No. 11 Crowley, sec. 48-9s-2w. Spudded.

Stanolind O. & G. Co. No. 18 Houssiere-Latrielle, sec. 47-9s-2w. 8⅝-in. csg. 5,358 ft.: 6⅝-in. csg. 7.005 ft.; T.D. 7,980 ft.; P.B. 6,679 ft.; I.P. 513 B.P.D.; ¼-in. ck.

Superior Oil Prod. Co. No. 2 Iowa-Jennings, sec. 41. Cd. sd. 6,500-40 ft.; run csg.

Superior Oil Co. No. 5 Leckelt, sec. 42-9s-2w. R.U.

Superior Oil Co. No. 6 Leckelt, sec. 42-9s-2w. Drlg. sd. 5,560 ft.

Superior Oil Co. No. 2 Moresi, sec. 41-9s-2w. Drlg. sh. 3,530 ft.

Superior Oil Prod. Co. No. 4 Leckelt, sec. 42-9s-8w. T.D. oil sd. 6,730-6,915 ft.; I.P. 500 B.P.D.; 13/64-in. ck.

Superior Oil Co. No. 1 Moresi, sec. 41-9s-2w. Oil sd. 6,550-6,714 ft.; rmg.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Wurzlow, sec. 32-19s-19e. R.U.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte (O.W.D.D.), sec. 20-17s-24e. Stuck D.S.; sdtrkd. at 9,410 ft.; drlg. sh. 9,509 ft.

Texas Co. No. 2 Milling, sec. 20-17s-24e. Dredging canal.

Texas Co. No. 7 Rigolet, sec. 29-17s-24e. T.D. 10,406 ft.; 7⅝-in. csg. 10,406 ft.; perf. csg. 9,982-10,006 ft.; I.P. 1,450 bbls. P.L.O. per day; ⅝-in. ck.

Texas Co. No. 1 State-Bayou Norman sec. 28-17s-24e. Drlg. sdy. sh. and L. 8,353 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 12-18s-25e. Drlg. sd. and L. 3,260 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 17 State, sec. 17-23s-18e. Drlg. sh. and L. 5,701 ft.

Leesville—Lafourche Parish

Texas Co. No. 54 Leesville, sec. 27-21s-

22e. T.D. 4,161 ft.; I.P. 108 B.P.D.; ¼-in. ck.

Lockport—Cameron Parish

Magnolia Pet. Co. No. 6 Freeburg, sec. 9 10s-9w. T.D. 6,935 ft.; run protection csg.

New Iberia—Iberia Parish

Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. S.D. 4,962 ft.; salt; P.B. and sdtrkd., drlg. sh. 5,212 ft.

Texas Co. No. 3 Bryant, sec. 25-12s-7e. Drlg. 2,312 ft.

Wm. Hellis No. 9 Bernard, sec. 54-12s-7e. Drlg. sh. 4,429 ft.; no report.

Wm. Hellis No. 5 Bullock-Burke, sec. 52-12s-7e. T.D. 5,147 ft.; 7-in. csg. 5,065 ft. comp.; no gauge.

Texas Co. No. 3 Duhe, sec. 26-12s-7e. Drlg. sh. 3,937 ft.

Texas Co. No. 6-B Hanzen, sec. 54-12-7e. T.D. 4,846 ft.; S.D.

Texas Co. No. 1 Schwing, sec. 71-12s-7e. Drlg. sh. 3,612 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 6 Kratzer, sec. 11-9s-4w. T.D. 8,704 ft.; perf. csg. 8,706-08 ft.; installing flow valves.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. et al No. 1 T.R.S. Farms Co., sec. 23-10s-4w. 12½-in. csg. 1,835 ft.; core sd. 8,170 ft.

Starks—Calcasieu Parish

Turnbull et al No. 2 Industrial Lbr. Co., sec. 19-9s-12w. Drlg. sh. 4,212 ft.; no report.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 846 fee, sec. 29-9s-10w. S.W. sd. 4,053 ft.; no report.

Union Sulphur Co. No. 847 fee, sec. 29-9s-10w. Drlg. sh. 2,730 ft.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 1-C Smedes, sec. 57-11s-6e. T.D. 9,645 ft.; heaving sh.; drill stem stuck.

Tide Water Oil Co. No. 4 Smedes, sec. 57-11s-6e. Abd. 6,884 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 Guillery, sec. 34-7s-2w. Drlg. sh. and L. 8,212 ft.

Continental Oil Co. No. 3-D Homeseekers Dev. Co., sec. 34-7s-2w. R.U.

Continental Oil Co. No. 2-B Veronie, sec. 28-7s-2w. Spd.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 1-A Harang, 60 ft. due west of No. 1 Harang. T.D. 5,415 ft.; 7-in. csg. 5,396 ft.; I.P. 650 B.P.D.; ¼-in. ck.

Pan American Prod. Co. No. 7 Harang, sec. 7-17s-20e. Drlg. sh. 3,637 ft.

Pan American Prod. Co. No. 8 Harang, sec. 9-17s-20e. Drlg. sh. 2,437 ft.

Pan American Prod. Co. No. 9 Harang, sec. 9-17s-20e. R.U.

Vinton—Calcasieu Parish

Katina Oil Co. No. 1 Vincent, sec. 34-10s-12w. 8-in. csg. 1,108 ft.; drlg. plug.

Superior Oil Co. No. 1 Gray, sec. 4-11s-12w. Drk.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. T.D. 5,426 ft.; left 900 ft. of D.S. in hole.

Humble O. & R. Co. No. 1 Floyd Williams, sec. 34-8s-1e. T.D. 8,037 ft.; P.B. 7,404 ft.; sdtrkd. 7,642 ft.; T.D. 8,106 ft.; sd. S.O.; recovering 12 stands of oil.

J. G. Mayo et al. No. 1 Bank of Commerce, sec. 19-7s-1e. 10¾-in. csg. 1,710 ft.; core sd. 8,168 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; T.D. 2,870 ft.; 7-in. csg. 2,766 ft.; shot well; failed to stop flwg. S.W.; S.D.

Avoyelles Parish

Coastal Mineral Co. No. 1 Purdy Hess, sec. 25-2n-3e. Drlg. sh. 2,700 ft.

Calcasieu Parish

Stanolind O. & G. Co. No. 1 Prairie Ld. & Canal Co., sec. 10-11s-9w. Spd.

Cameron Parish

Humble O. & R. Co. No. 1 Hanzen, sec. 5-12s-6w. 13⅜-in. csg. 3,046 ft.; drlg. sdy. sh. 8,549 ft.

Pure Oil Co. No. 2 State, sec. 14-13s-3w. Drlg. sd. and gravel 1,379 ft.

Southern Sulphur Co. No. 2 State, sec. 29-15s-10w. S.D. 2,611 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State-Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w. Driving piling.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-9s-2e. 10¾-in. csg. 1,950 ft.; T.D. 6,115 ft.; drill stem stuck.

Louisiana Crusader Oil Co. No. 2 Louisiana State. 10¾-in. csg. 2,182 ft.; drlg. sdy. sh. 7,272 ft.

East Feliciana—Wild

Koch et al No. 1 Andrews, sec. 69-2s-3e. 10-in. csg. 1,086 ft.; core S.W. sd. 4,942 ft.

Evangeline Parish

Continental Oil Co. No. 1 Tate, sec. 44-3s-2e. Drlg. sd. 4,563 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 414 State Lake Pigneur, Twp. 12s-5e. Top salt 980 ft.; set 10¾-in. csg. 5,095 ft.; top oil sd. 6,915 ft.; 7-in. csg. 6,930 ft.; cd. salt 7,060 ft.; T.D. 7,069 ft.; waiting on rig.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. Drlg. chalk 2,467 ft.

Jefferson Davis Parish

Louisiana Crusader Oil Corp. No. 1 Langley, sec. 36-7s-5w. T.D. 7,450 ft.; P.B. to sdtrk. at 6,868 ft.; T.D. 9,045 ft.; tstd. S.W. through perf. csg. 7,358-64 ft.; making squeeze job; to reperf.

Stanolind O. & G. Co. No. 2-B Calcasieu Natl. Bank, sec. 28-7s-3w. 13⅜-in. csg. 1,950 ft.; core sd. rk. 8,955 ft.; S.G. S. 950 ft.

Lafourche Parish

Gulf Oil Corp. No. 3 State, sec. 36-23s-21e. Drlg. sdy. sh. 500 ft.

Plaquemines Parish

Tide Water Oil Co. No. 3 Manhattan Fruit Co., sec. 26-21s-30e. Top sd. S.O. 7,187 ft.; T.D. 7,208 ft.; run csg. to test.

Rapides Parish

R. D. Webb No. 1 A. M. Brasher, sec. 22-4n-2w. S.D. 5,236 ft.

St. Bernard Parish

Gulf Oil Corp. No. 1 Lake Lery, sec. 28-14s-14e. Drlg. sd. 6,634 ft.

Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13¾-in. csg. 303 ft.; drlg. sd. and sh. 3,439 ft.

St. Charles Parish

Amerada Pet. Corp. and La. Ld. & Expl. Co. No. 1 State, sec. 13-15s-20e. Cd. oil sd. 6,828-95 ft.; T.D. 7,124 ft.; 9⅝-in. csg. 7,118 ft.; drlg. sdy. sh. 8,130 ft.

St. Landry Parish

Gulf Oil Corp. No. 1 Haas & Hirsch, sec. 12-6s-7e. Drlg. sd. and sh. 6,678 ft.

St. Martin Parish

Geo. E. Lilly et al No. 1 Martin, sec. 32-9s-7e. Top salt 4,293 ft.; T.D. 4,450 ft.; abd.

Texas Co. No. 3 State, sec. 14-10s-9e. cmtd. on bttm.; T.D. 8,208 ft.; top salt 8,175 ft.; P.B. 7,600 ft.; top of cmt. plug 7,674 ft.; sdtrkd.; drld. into old hole at 7,800 ft.; P.B. 7,652 ft.; sidetrack 7,794 ft.; recovered mud on drill stem 7,826-50 ft.; cd. to 7,852 ft.; P.B. to sdtrk. at 6,720 ft.

St. Mary Parish

Texas Co. No. 1 Horse Shoe Bayou, sec. 40-17s-9e. T.D. 10,975 ft.; 7⅝-in. csg. 18-in. csg. 101 ft.; T.D. 12,261 ft.; blew out; caught fire; burned for 1 hr. and hole bridged; washing over D.S. at 10,976 ft.

Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. T.D. 10,541 ft.; D.S. stuck at 9,070 ft.

Vernon Parish

George Greer et al No. 1 Commercial Natl. Bank, sec. 9-1s-8w. Drlg. sh. 3,660 ft.

TEXAS

Week Ending July 10

GULF COAST FIELDS

Danbury—Brazoria County

Rowan Drlg. Co. No. 1 Jamison, Henry Austin Sur. Spd.

Hastings—Brazoria County

Humble O. & R. Co. No. 11 Brown, W. H. Snyder Sur. Drlg. sh. 3,130 ft.

Humble O. & R. Co. No. 13 Brown. T.D. 6,070 ft.; I.P. 26 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 1 Haden. T.D. 6,125 ft.; 5½-in. csg. 6,124 ft.

Humble O. & R. Co. No. 1 Knack, Perry & Austin Sur. T.D. 6,111 ft.; I.P. 7 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 1 W. H. Schindler, H.T.&B. Sur. No. 30. 5½-in. csg. 5,750 ft.; I.P. 27 B.P.H.; ¼-in. ck.

Humble O. & R. Co. No. 2 South Texas Grain Co., Perry & Austin Sur. Drlg. sh. 1,350 ft.

Stanolind O. & G. Co. No. 4 Autrey, H. T.&B. Sur. No. 37. R.U.

Stanolind O. & G. Co. No. 4-A Avitts, A.C. H.&B. Sur. No. 1. Abd. 6,146 ft.

Stanolind O. & G. Co. No. 1 Barnett. R.U.

Stanolind O. & G. Co. No. 4 Blount. Drlg. sh. and L. 5,837 ft.

Stanolind O. & G. Co. No. 2 Mary Condon, H.T.&B. Sur. No. 29. 10¾-in. csg. 1,644 ft.; T.D. 6,080 ft.; 7-in. csg. 5,912 ft.; I.P. 651 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 3 Curkett. T.D. 6,080 ft.; 7-in. csg. 5,775 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 DeWitt. Drlg. sh. 3,780 ft.

Stanolind O. & G. Co. No. 10 Drake, H. T. &B. Sur. No. 36. T.D. 6,080 ft.; 7-in. csg. 5,939 ft.; tstg.

Stanolind O. & G. Co. No. 4 Edwards. T.D. 6,080 ft.; 7-in. csg. 6,008 ft.

Stanolind O. & G. Co. No. 4 Gendo. Drlg. sh. and L. 4,120 ft.

Stanolind O. & G. Co. No. 6 Emil Grote, A.C.H.&B. Sur. T.D. 6,080 ft.; tstg.

Stanolind O. & G. Co. No. 1-C Heram Moore, R. A. Magle Sur. T.D. 6,080 ft.; run csg.

Stanolind O. & G. Co. No. 4 Hutchinson. Core sd. 5,950 ft.

Stanolind O. & G. Co. No. 1 Kay, H.T.& B. Sur. No. 29. Drlg. sh. 2,257 ft.

Stanolind O. & G. Co. No. 2 McKibben, H.T.&B. No. 29. 10¾-in. csg. 1,221 ft.; T.D. 6,157 ft.; 7-in. csg. 6,130 ft.

Stanolind O. & G. Co. No. 2 Reichardt, H.T.&B. Sur. No. 29. Drlg. sh. and L. 3,812 ft.

Stanolind O. & G. Co. No. 7 Laura Shaw, H.T.&B. Sur. No. 36. T.D. 6,157 ft.; 7-in. csg. 6,125 ft.

Stanolind O. & G. Co. No. 8 Paul, A.C. H.&B. Sur. 10¾-in. csg. 1,234 ft.

Stanolind O. & G. Co. No. 10 Steve Paul. T.D. 6,080 ft.; 7-in. csg. 5,958 ft.; I.P. 589 B.P.H.; ¼-in. ck.

Stanolind O. & G. Co. No. 11 Steve Paul, A.C.H.&B. Sur. T.D. 6,080 ft.; 7-in. csg. 5,952 ft.; I.P. 630 P.B.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 12 Paul, A.C.H. &B. Sur. T.D. 1,250 ft.; run csg.

Stanolind O. & G. Co. No. 1 Thornton. T.D. 6,080 ft.; 7-in. csg. 5,976 ft.; I.P. 628 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 8 Turner, A.C. H.&B. Sur. Drlg. sh. 5,750 ft.

Lockridge—Brazoria County

Gulf Oil Corp. No. 1 Stevens, J. W. Hall Sur. Drlg. sh. 1,969 ft.

Gulf Oil Corp. No. 2 Baker, J. W. Hall Sur. R.U.

Gulf Oil Corp. No. 5-A Wilkes & Smith, J. W. Hall Sur. Drlg. sh. 4,025 ft.

Gulf Oil Corp. No. 2-A Wood, J. W. Hall Sur. T.D. 6,368 ft.; making D.S.T.

Kirby Pet. Co. No. 1 Baker, J. W. Hall Sur. R.U.

Shell Pet. Corp. No. 1-B Ramsey, J. W. Hall Sur. R.U.

Manvel—Brazoria County

Texas Co. No. 25 B. W. T. Belcher, H. N. Little Sur. 10-in. csg. 1,176 ft.; T.D. 5,150 ft.; 7-in. csg. 5,086 ft.; tstg.

Texas Co. No. 30 H.O.F. A.C.H.&B. Sur. 7-in. csg. 5,660 ft.; T.D. 5,690 ft.; tstg.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Larsen, C. Breen Sur. Drlg. 2,067 ft.

Harrison and Abercrombie No. 4 Bernard River Ld. and Development Co., Charles Breen Sur. 13¾-in. csg. 1,405 ft.; 9⅝-in. csg. 7,005 ft.; T.D. 10,408 ft. ; 7-in. csg. 10,400 ft.; cg. sd. and sh. 10,604 ft.

Sandy Point—Brazoria County

Stanolind O. & G. Co. No. 1 Fite, D. Talley Sur. Drlg. sh. 2,250 ft.

Stratton Ridge—Brazoria County

A. B. Head et al No. 1 Seeburn Est., J. E. Groce Sur. Drlg. sh. 1,620 ft.

Calhoun—Heyser—Victoria County

George Echols No. 5 Bennett, J. Galban Sur. 10¾-in. csg. 636 ft.; T.D. 5,753 ft.; 7-in. csg. 5,753 ft.

Humble Oil & Plymouth Oil Co. No. 8 E. H. Welder, J. M. Rios Sur. T.D. 5,456 ft.; I.P. 7 B.P.H.; ⅞-in. ck.

Humble O. & R. Co. No. 1 P. H. Marshall, A. Sisneros Sur. Drlg. sh. and sd. 5,202 ft.

Humble O. & R. et al No. 15-B P. H. Welder, A. Sisneros Sur. T.D. 5,480 ft.; I.P. 7 B.P.H.; ⅞-in. ck.

Humble O. & R. Co. No. 9 E. H. Welder, J. M. Rios Sur. Drlg. sh. and L. 5,381 ft.

Normandie Oil Co. No. 1 J. G. Cook, A. Sisneros Sur. Drlg. sh. and L. 4,793 ft.

Portilla Drilling Co. No. 8-C P. H. Welder, A. Sisneros Sur. Spd. (cor.).

Anahuac—Chambers County

Gulf Oil Corp. No. 2 Pommer, sec. 40, H &T.C. Sur. T.D. 7,125 ft.; rng. screen.

Humble O. & R. Co. No. 8 Gripon, T.D. 7,095 ft.; I.P. 21 B.P.H.; ¾-in. ck.

Humble O. & R. Co. No. 9 Johnson, H.& T.C. Sur. T.D. 7,085 ft.; 5½-in. csg. 7,056 ft.

Humble O. & R. Co. No. 1-D Middleton, sec. 116, H.T.&B. Sur. Drlg. sh. 7,521 ft.

Humble O. & R. Co. No. 5 Shaver. T.D. 7,127 ft.; 5½-in. csg. 7,118 ft.

Humble O. & R. Co. No. 9 Zoppe, sec. 51, H.&T.C. Sur. Drlg. sh. 3,850 ft.

Cotton Lake—Chambers County

Salt Dome Oil Corp. and Gulf Oil Corp. No. 1 A. B. Lawrence, B. Winfree Sur. 9⅝-in. csg. 1,169 ft.; drlg. sh. 5,607 ft.

Salt Dome Oil Co. No. 2-B Lawrence, S. Barrow Sur. R.U.

Seabreeze—Chambers County

Sun Oil Co. No. 2 H. O. Acom, H.T.&B. Sur. No. 23. 18⅝-in. csg. 91 ft.; T.D. 8,795 ft.; D.S. stuck.

Sun Oil Co. No. 1 Jackson, Yarbo Sur. T.D. 8,570 ft.; sd. and sh. S.G.; rmg. to run csg.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1 Mayes, E. Wallis Sur. Drlg. sh. 3,914 ft.

Stanolind O. & G. Co. No. 3 Middleton, Carroll Sur. R.U.

Sun Oil Co. No. 4 Chambers, M. A. Carroll Sur. T.D. 6,586 ft.; comp. for dry gas well.

Big Creek—Fort Bend County

Barnett Pet. Corp. No. 2 J. H. P. Davis B. Nickson Sur. T.D. 3,080 ft.; P.B. and sdtrkd.; T.D. 3,729 ft.; perf. csg. 3,697-3,705 ft.; stuck screen.

Gulf Oil Corp. No. 76 Davis, M. Young Sur. T.D. 2,764 ft.; 7-in. csg. 2,725 ft.; I.P. 169 B.P.D.; ¼-in. ck.

Boling—Fort Bend County

Mackhank Oil Co. No. 6-C E. C. Farmer, A. Scott Sur. T.D. 883 ft.; W.O.C.

Blue Ridge—Fort Bend County

Telshaw-Reese and Echelson No. 1 Blakely, E. Drew Sur. R.U.; abd. loc.

Orchard—Fort Bend County

Gulf Oil Corp. No. 52 Moore, James Frazier Sur. T.D. 4,123 ft.; I.P. 429 B.P.D.; ¼-in. ck.

Gulf Oil Corp. No. 53 Moore, J. Frazier Sur. T.D. 6,267 ft.; run 9⅝-in. csg.

Gulf Oil Corp. No. 54 Moore, J. Frazier Sur. R.U.

Sugarland—Fort Bend County

Strake Pet. Co. No. 1 Deathridge, E. Alcorn Sur. T.D. 3,862 ft.; D.S. stuck.

Thompson—Fort Bend County

Texas Co. No. 3 Sherman, S. Kennedy Sur. Drlg. sh. and L. 5,026 ft.

Dickinson—Galveston County

Atlantic O. & R. Co. No. 2 Lippman, W. G. Banks Sur. Drlg. sh. 1,550 ft.

Bennet-Kenyon Oil Co. No. 1 Schroeder, W. G. Banks Sur. T.D. 100 ft.; run surf. csg.

Coast Pet. Co. No. 7 Stewart, W. K. Wilson Sur. Drlg. sh. 2,635 ft.

Humble O. & R. Co. No. 20-A Stewart, W. K. Wilson Sur. Drlg. sh. 8,240 ft.

Humble O. & R. Co. No. 1-C Stewart, W. K. Wilson Sur. Drlg. sh. 2,019 ft.

Pure Oil Co. No. 2-B Shelor, W. G. Banks Sur. T.D. 8,120 ft.; 7-in. csg. on bttm.; perf. csg. 8,051-61 ft.; I.P. 297 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 7 State. 13⅜-in. csg. 2,013 ft.; T.D. 6,472 ft.; 9⅝-in. csg. 6,090 ft.; core sdy. sh. 8,896 ft.

Turman Oil Co. No. 2 Stewart, W. K. Wilson Sur. T.D. 8,792 ft.; 7-in. csg. 8,790 ft.; perf. 8,764-87 ft.; tstd. oil and S.W.; to set retainer.

High Island—Galveston County

Stanolind O. & G. Co. No. 62-A Cade, M. Fitzsimmons Sur. T.D. 5,800 ft.; P.B. and sdtrkd.; drlg. sh. 3,901 ft.

Stanolind O. & G. Co. No. 1 C. E. Smith, M. Dunman Sur. Drlg. sd. and L. 2,767 ft.

Stanolind O. & G. Co. No. 15-A Smith, M. Dunman Sur. Cg. sd. 6,375 ft.

Batson—Hardin County

Dee-Tee Drlg. Co. No. 1 Melhome, J. Melhome Sur. T.D. 3,493 ft.; abd.

Silsbee—Hardin County

Humble O. & R. Co. No. 1 Kirby, G. W. Brooks Sur. T.D. 6,989 ft., S.W. sd.; 5½-in. csg. 6,986 ft.; I.P. 230 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 2 M. L. Kirby, Ellery Sur. R.U.

Republic Prod. Co.-Houston Oil Co. No. 17 Brooks, G. W. Brooks Sur. 10¾-in. csg. 1,714 ft.; T.D. 6,932 ft.; S.W. sd.; P.B. 5,400 ft.; to sdtrk.

Republic Prod. Co. No. 18 G. W. Brooks, Brooks Sur. 10¾-in. csg. 1,548 ft.; W. O.C.

Republic Prod. Co.-Houston Oil Co. No. 19 Brooks, G. W. Brooks Sur. R.U.

Bammel—Harris County

Geo. Lawrence No. 2 Zapp, J. Farwell Sur. R.U.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 Candelari, O.W.D.D.; sdtrkd.; drlg. sh. 7,749 ft.

Goose Creek—Harris County

Bob Foster No. 1 Esenhour, Wm. Scott Sur. T.D. 2,741 ft.; tstg.

Pierce Junction—Harris County

Gulf Oil Corp. No. 13-C Cain, J. Hamilton Sur. Drlg. sdy. sh. 4,002 ft.

South Houston—Harris County

Stanolind O. & G. Co. No. 2, Dist. No. 23. T.D. 4,133 ft.; P.B. 2,200 ft.; T.D. 4,062 ft.; 5¾-in. csg. 4,031 ft.; killed; prep. to P.B.; fsg. for screen.

Stanolind O. & G. Co. No. 2, Drlg. Dist. No. 7. R.U.

Stanolind O. & G. Co. No. 2, Dist. 20. 9⅝-in. csg. 1,449 ft.

Stanolind O. & G. Co. No. 7 First Natl. Bank. T.D. 4,052 ft.; S.W. sd.; W.O.O.

Stanolind O. & G. Co. No. 8 First Natl. Bank, Callahan & Vance Sur. R.U.

Tomball—Harris County

Humble O. & R. Co. No. 2 Burlington Rock Island. Drlg. sh. 5,572 ft.

Humble O. & R. Co. No. 2 Heeck, Wm. Heird Sur. T.D. 5,582 ft.; swbg.

Humble O. & R. Co. et al No. 16 Reid, Goodrick Sur. R.U.

Humble O. & R. Co. No. 2 Black, J. Pruitt Sur. T.D. 5,565 ft.

Humble O. & R. Co. No. 2-B Jurgens. T.D. 5,580 ft.

Southwest Inv. Co. No. 3 Hillegiest, J. House Sur. T.D. 5,180 ft.; fsg.

Texas Co. No. 4 Hillegiest, J. House Sur. Drlg. sh. 4,969 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Burford, C. Williams Sur. T.D. 6,778 ft.; ratio too high; recompleting.

Humble O. & R. Co. No. 1 Charpect, C. Williams Sur. Drlg. 1,044 ft.; (cor.).

Humble O. & R. Co. No. 4 Crook, C. Williams Sur. T.D. 6,779 ft.; rng.

Humble O. & R. Co. No. 5 Langham, C.

Williams Sur. 9⅝-in. csg. 1,025 ft.; T.D. 6,777 ft.; I.P. 26 B.P.H.; ¼-in. ck.
Humble O. & R. Co. No. 5 Guinn, C. Williams Sur. T.D. 6,778 ft.; 5½-in. csg. 6,775 ft.; I.P. 25 B.P.H.; ¼-in. ck.
Humble O. & R. Co. No. 1 McCormick. T.D. 6,778 ft.; 5½-in. csg. 6,763 ft.
Humble O. & R. Co. No. 4 Peveto, C. Williams Sur. R.U.
Humble O. & R. Co. No. 7 Peveto, C. Williams Sur. T.D. 6,778 ft.; 5½-in. csg. 6,775 ft.; ratio high; recompleting.
Humble O. & R. Co. No. 1-D Pinchback, C. Williams Sur. Drlg. sh. 3,490 ft.
Humble O. & R. Co. No. 4 Pinchback, C. Williams Sur. T.D. 6,776 ft.; I.P. 27 B.P.H.; ¼-in. ck.
Humble O. & R. Co. No. 5 Tyrell-Combest, C. Williams Sur. T.D. 6,787 ft.; 5½-in. csg. 6,782 ft.
Humble O. & R. Co. No. 11 Tyrell Combest, C. Williams Sur. Core S.W. sd. 6,832 ft.
Humble O. & R. Co. No. 1 Viola, C. Williams Sur. Drlg. sh. 231 ft.
Glenn H. McCarthy No. 3-A Longe, H. Williams Sur. T.D. 5,401 ft.; comp.; no gauge.
Stanolind O. & G. Co. No. 3 W. P. McCormick, H. Williams Sur. T.D. 5,400 ft.; 7-in. csg. 5,369 ft.
Stanolind O. & G. Co. No. 4 McCormick, H. Williams Sur. Drlg. sh. and L. 1,416 ft.
Stanolind O. & G. Co. No. 4 Sargl, H. Williams Sur. T.D. 6,106 ft.; P.B. 6,063 ft.; tstg.
Sun Oil Co. No. 1 Galley, Houston Sur. 16-in. csg. 107 ft.; T.D. 5,428 ft.; 7-in. csg. on bttm.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2-B Pipkin, Wm. McFadden Sur. Drlg. sd. and sh. 5,221 ft.
Stanolind O. & G. Co. No. 2 May Fitzhugh, Wm. McFadden Sur. Drlg. sh. and L. 2,467 ft.
Stanolind O. & G. Co. No. 4-A Pipkin T.&N.O. Sur. Drlg. sd. and L. 3,750 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 8 Junker, Wm. Smith Sur. 10¾-in. csg. 1,948 ft.; drlg. sh. and L. 5,491 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur. 18⅝-in. csg. 109 ft.; 9⅝-in. csg. 8,538 ft.; T.D. 9,951 ft.; 7-in. csg. 9,951 ft.; W.O.C.

Nome—Jefferson County

Shell Pet. Corp No. 3 "B" Unit, M. E. Peveto Sur. T.D. 6,050 ft.; 5-in. csg. 6,010 ft.
Sun Oil Co. No. 3 Burrows, J. Blair Sur. R.U.
Sun Oil Co. No. 4 Burrows, J. Blair Sur. R.U.
Sun Oil Co. No. 1 Tindell, A. Horton Sur. Drlg. L. and sh. 6,738 ft.
Sun Oil Co. No. 9 Paggi, J. W. Kirby Sur. T.D. 6,045 ft.; 5¾-in. csg. 6,008 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 19-C Kirby, J. Pleasants Sur. Spd.

Esperson—Liberty County

General Crude Oil Co. No. 30 Moores Bluff, M. Denman Sur. T.D. 2,946 ft.

Hankamer—Liberty County

Gulf Oil Co. No. 25 E. W. Boyt, Amos Allen Sur. Cg. sd. 4,096 ft.
L. W. Wickes No. 1 Lynott Buffman, J. Robinson Sur. R.U.

Hardin—Liberty County

Jack Frazier No. 1 Roberts, H. B. Johnston Sur. Drlg. sh. 3,100 ft.
Woodley Pet. Co. No. 1 McMurtay, H. B. Johnston Sur. 10-in. csg. 1,164 ft.; drlg. sh. 3,153 ft.

Hull—Liberty County

Bishop Oil Co. No. 1 C. R. Wilson, J. Devore Sur. Oil sd. 780-88 ft.; T.D. 4,127 ft.; 7-in. csg. 2,204 ft.; perf. csg. 2,286-90 ft.; P.B. and strkd.; S.D. 2,276 ft.
Gulf Oil Corp. No. 24 Baldwin, J. Devore Sur. Drlg. sh. 4,372 ft.
Hamill & Smith No. 3 Barrow, J. Devore Sur. Drlg. sh. 4,035 ft.
Houston Prod. Co. No. 2 Hannah, J. Devore Sur. Drlg. sh. 1,685 ft.
Republic Prod. Co. No. 162 Dolbear, J. Devore Sur. T.D. 2,960 ft.; P.B. and sdtrkd.; T.D. 3,277 ft.; 7-in. csg. 2,916. ft.; abd.
Texas Co. No. 7 Hannah fee, J. Devore Sur. Drlg. sd. and sh. 5,232 ft.

Bay City—Matagorda County

Hamman Expl. Co. No. 2 J. C. Crooker, E. Hall Sur. Drlg. sh. 1,216 ft.

Buckeye—Matagorda County

United North & South Development Co. No. 1 G.B.M. Cotton League. 13⅜-in. csg. 1,530 ft.; drlg. sh. 4,650 ft.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Top salt 796 ft.; base salt 2,099 ft.; 18⅝-in. csg. 2,174 ft.; 13⅜-in. csg. 3,700 ft.; 9⅝-in. csg. 5,689 ft.; T.D. 5,969 ft.; hole cleaned; P. B. and sdtrkd.; making up 3-in. drill pipe; 7-in. csg. 6,044 ft.; drlg. sh. 6,057 ft.

Markham—Matagorda County

Turman Oil Co. et al No. 3 Hudson, H. Parker Sur. R.U.

Palacios—Matagorda County

Glenn McCarthy No. 2 Foley, L. Goodwins Sur. Drlg. 500 ft.
Glenn McCarthy No. 1 W. M. Rohls, sec. 10, L. Goodwin Sur. Drlg. sh. 1,693 ft.
Glenn McCarthy No. 1 Palacious State Bank, L. Goodwin Sur. Drlg. 495 ft.
Sun Oil Co. No. 1 Bay Shore Farms, Lewis Goodwin Sur. 13⅜-in. csg. 1,910 ft.; core sd. and sh. 7,765 ft.; well tried to blow out at 7,647 ft.

Van Vleck—Matagorda County

Skelly Oil Co. No. 2 Johnson, M. Cummins Sur. T.D. 8,465 ft.; rng. 7-in. csg

Segno—Polk County

J. K. Dorrance No. 2 Wing, I.&G.N. Sur. No. 15. 7-in. csg. 5,185 ft.; T.D. 5,301 ft.; S.W. sd.; P.B. 5,204 ft.; swbd. some oil; reworking.
J. K. Dorrance No. 3 Wing, I.&G.N. Sur. No. 15. 10¾-in. csg. 709 ft.; T.D. 5,458 ft.; S.D.; abd.
Gulf Oil Corp. No. 1-B Quinn, A. Morale Sur. R.U.
Gulf Oil Corp. No. 1 Ragan, I.&G.N. Sur. No. 15. T.D. 6,013 ft.; P.B. 5,460 ft. to straighten hole; D.S. stuck; cutting and pulling.
Gulf Oil Corp. No. 7 Wing, I.&G.N. Sur. No. 15. R.U.
Humble O. & R. Co. No. 5-B Kirby Lbr. Co., M. Victor Sur. Core sd.; no show 5,342 ft.
Laquinta No. 3 Wing, I.&G.N. Sur. No. 15. Cg. 5,100 ft.

Quintana-O'Connor-Greta—Refugio County

United Gas Co. No. 54 Lambert, J. M. Swisher Sur. T.D. 5,890 ft.
United Gas Corp. No. 55 Lambert, Swisher Sur. T.D. 5,904 ft.; tstg.
United Gas Corp. No. 12 J. J. O'Brien. T.D. 9,225 ft.; perf. liner 8,103-8,128 ft.; tstg. S.W.; P.B. 7,800 ft.; tstd. S.W.; P.B.

Spurger—Tyler County

Republic-Houston Oil Co. No. 4 Hurd, N. Hurd Sur. Drlg. sh. 2,000 ft.

Tellener—Victoria County

Magnolia Pet. Co. No. 1 Beck, T.&N.O. Sur. Drlg. sh. 3,365 ft.

Keeran—Victoria County

Union Oil Co. No. 5 Keeran, M. DeLeon Sur. T.D. 6,027 ft.; 7-in. csg. 6,027 ft.

McFadden—Victoria County

Transwestern Oil Co. No. 3 J. A. McFadden, Julus Varian Sur. T.D. 6,231 ft.; perf. csg. 5,190-93 ft.; comp. for dry gas well.
Transwestern Oil Co. No. 4, McFaddin Sur. R.U.

Placedo—Victoria County

Barnsdall Oil Co. et al No. 19 Pickering-Roos, S.A.&M.G. Sur. 10¾-in. csg. 881 ft.; T.D. 4,775 ft.; I.P. 186 B.P.D.; ⅞-in. ck.
Barnsdall-American Liberty Oil Co. No. 20 Pickering, S.A.&M.G. Sur. T.D. 890 ft.; W.O.C.
Barnsdall Oil Co.-American Liberty Oil Co. No. 11 Pickering, S.A.&M.G. Sur. Drlg. sh. and L. 4,705 ft.
T. N. Development Co. No. 1 Henderson, S.A.&M.G. Sur. R.U.
Lion O. & R. Co. No. 3 S. W. Wright. S.A.&M.G. Sur. T.D. 4,775 ft.; R.U. to pmp.
Magnolia Pet. Co. No. 9 Chas. Sklar, S.A. &M.G. Sur. T.D. 4,777 ft.; 7-in. csg. 4,764 ft.; P.B. 4,775 ft.; I.P. 70 bbls. in 16 hrs.
Magnolia Pet. Co. No. 10 Sklar, S.A.&M. G. Sur. Drlg. sh. 3,919 ft.
H. B. Ownby No. 6 Traylor, S.A.&.M.G. Sur. T.D. 4,771 ft.; 5½-in. csg. 4,754 ft.
Shell Pet. Corp. No. 5 Houston Natl. Bank, 4,779-83 ft.; tstd. oil and S.W.

Clay Creek—Washington County

Oak Oil Corp. No. 1 G. Cockrell, J. F. Perry Square Sur. T.D. 1,365 ft.; W. O.C.
Sun Oil Co. No. 6 Droger, J. Perry Sur. T.D. 5,350 ft.; P.B. 3,100 ft.; W.O.C.

Five Corners—Wharton County

Texas Co. No. 7-B Pierce Est., J. Caldwell Sur. T.D. 5,555 ft.; 7-in. csg. 5,554 ft.; flwd. oil and S.W.; squeezed off bttm. with cmt.; flwd. 75% S.W.; killed; reset screen; swabbed S.W.; pulling screen; set retainer 5,524 ft.; P.B. and sdtrkd.; drlg. 5,367 ft.

Louise—Wharton County

Pure Oil Co. No. 4 Houston, T. W. Hurd Sur. T.D. 5,150 ft.; 7-in. 5,110 ft.; tstg.

Magnet—Wharton County

Atlantic Ref. Co. No. 2-B H. C. Cockburn, Smith & McKenzie Sur. Drlg. sh. 1,261 ft.
Humble O. & R. Co. No. 1 Cockburn, S. Castleman Sur. 10¾-in. csg.; 1,236 ft.; T.D. 5,550 ft.; oil sd.; run csg.
Texas Crusader Oil Co. No. 1-B Sweet, Smith & McKenzie Sur. Drlg. sh. 4,434 ft.

Pickett Ridge—Wharton County

Texas Co. No. 33-A Pierce Est., G.B.&N Sur. No. 4; 9,000-ft. test. Drlg. sh. 7,730 ft.

Withers—Wharton County

Texas Co. No. 31-C Pierce, Wm. Pettus Sur. T.D. 5,557 ft.; 7-in. csg. 5,552 ft.; tstg.
Texas Co. No. 35-C Pierce, Wm. Pettus Sur. T.D. 1,190 ft.; W.O.C.
Texas Co. No. 34-C Pierce Estate, Wm. Pettus Sur. T.D. 5,500 ft.; S.D.
Texas Co. No. 36-C Pierce Est., Wm. Pettus Sur. R.U.

GULF COAST WILDCATS

Austin County

Cockburn Oil Corp. No. 1 Bartay-Mott and Steno, S.S.E.Y. Sur. 10¾-in. csg 360 ft.; T.D. 4,005 ft.; abd.
Ohio Oil Co. No. 1 Kempner Adams, H. T.&B. Sur. No. 33. R.U.
Humble O. & R. Co. No. 1 W. B. Munson, S. Carter Sur. R.U.
Texas Gulf Prod. Co. No. 1 W. D. Adams, H.T.&B. Sur. No. 40. Drk.

Brazoria County

Pure Oil Co. No. 1 P. M. Slade, S. F Austin Lge. Drlg. sh. and L. 8,055 ft.
Texas Co. No. 2 Robbins, James W Brougham Sur. 13⅜-in. csg. 5,498 ft. 9⅝-in. csg. 6,060 ft.; T.D. 7,465 ft.; reaming.

Chambers County

David B. MacDaniels No. 1 S. E. Barrow, Luke Bryan Sur. R.U.

Colorado County

Coyle & Concord No. 3-B Powell. I.&G.N Sur. No. 45. Drlg. sh. 3,350 ft.

Fort Bend County

Research, Inc., No. 1 Moore, S. Kennedy Sur. Drlg. sh. and L. 4,764 ft.
Dick Schwab and Gem Oil Co. No. 1 David Fitzgerald Sur. 10¾-in. csg. 1,058 ft.; abd. 6,540 ft.

Harris County

Humble O. & R. Co. No. 1 Settegast, Perry and Austin Sur. T.D. 6,040 ft.; 7-in. csg. 5,802 ft.
Superior Oil Co. No. 1 Butler, Eehrhardt Sur. Drlg. sh. 9,402 ft.
West Prod. Co. No. 1 Ammon Underwood, Nicklos Clopper Sur. R.U.

Jackson County

George W. Greet et al No. 1 J. R. Davis, David Hoffman Sur. T.D. 5,741 ft.

Jefferson County

H. E. Hebert and Smith No. 1 Broussard, H.T.&B. Sur., sec. 10. Drlg. S.W. sd. 6,852 ft.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarty Sur. 20-in. csg. 120 ft.; 11¾-in. csg. 5,409 ft.; T.D. 6,612 ft.; heaving sh.
Royal O. & G. Corp. No. 1 T. J. Ewing, Burnett and Sojourner Sur. Cg. sh. 5,268 ft.

Montgomery County

Texas Co. No. 1 Crawford, Y. Springer Sur. T.D. 4,620 ft.; abd.

Newton County

Houston Oil Co.-Republic Prod. Co. No. 1 Sabine Tram Co., H.&T.C. Sur., sec. 35. Spd.

Polk County

H. E. Williams & Thompson No. 1 Carter, H. Augustine Sur. R.U.

San Jacinto County

Cockburn Oil Corp. et al No. 1 Whitten, Wm. West Sur. T.D. 5,602 ft.; drill stem stuck.

Tyler County

McArthur & Nixon No. 1 Kountze, J. A. Hankins Sur. S.D. 3,525 ft.

Washington County

K. D. Harrison and C. E. Starr No. 1 Charles and Wm. Ellerman, Wm. Bridges Lge. 13-in. csg. 290 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 2 Kate Edwards, 330 ft. S line, Lot 85, 660 ft. SW No. 1, Wm. Lewis Sur. Drlg. 9,125 ft.
Danray Oil Co. No. 1 Davis, Tr. 5, Wm. Boyd Sur. Drlg. 8,855 ft.

Atascosa County

L. G. Priest No. 1 Bridwell, Tr. 45, Gorman Sur. S.D. 2,145 ft.

Bastrop County

R. Pulliam No. 1 Yoast, Garcia Sur. R.U.
Marts & Beavens No. 1 Kennard, G. Glasscock Sur. R.U.
Texas North Oil Co. No. 1 Barton, J. Rogers Sur. R.U.

Bee County

J. J. Cosner No. 1 Franklin Life, Morena Gr. Spdg.

Bexar County

L. & K. Oil Co. No. 1 Russell, Rodriguez Sur. Set csg. 21 ft.; W.O.C.

Blanco County

T. L. Nixon No. 1 Hornberger, 1,200 ft. S line, 300 ft. E line, Sur. 723. S.D. 1,216 ft.
H. T. Roe No. 4 Morrisey, Webb Sur. 91. Spd. in.

Brooks County

Standard of Tex. No. 1 Mestina, Mestina Lse. No. 3. T.D. 6,786 ft.; P.B. 5,296 ft.; W.O. perf.

Caldwell County

F. & W. Drlg. Co. No. 1 Rodenberg, J. Berry Sur. T.D. 2,029 ft.; rng. tbg.
E. H. Grazer No. 1 Field, Dikes Sur. T.D. 1,965 ft.; swbg. oil.
J. O. Mack, Jr., No. 1 Withers, Wm. House Sur. S.D. 1,475 ft.
C. R. Richardson No. 1 Patterson, S. Pettus Sur. S.D. 780 ft.; D.&A.
G. C. Richardson No. 1 Trammel, E. Berry Sur. Drlg. 2,059 ft.
Lee Ross No. 1 Daugherty, John Tyler Sur. Drlg. 556 ft.
Sherman Nelson No. 1 Etheridge, T. Hunter Sur. T.D. 2,180 ft.; R.U.; W.O.O.
Siznod Oil Co. No. 1 Reed, M. G. Dykes Sur. M.I.M.

Cameron County

Ruez-Morton No. 1 United Land Irr. Co., Lot 7, Blk. 402, El Jardin Subd. S.D. 5,925 ft.
Stapper Petroleum Corp. No. 1 Port Isabel Irrigation Co., Blk. 17, P.I.I.Co. Subd. Stanto Gr. S.D. 8,000 ft.

Comal County

J. R. Yates No. 1 Heidrich, Heidrich ranch. R.U.

Dimmitt County

Wilcox O. & G. Co. No. 1 Light ranch, 330 ft. N and E line, sec. 67. Drlg. 7,856 ft.

Duval County

Govt. Wells Oil Co. No. 2 Lundell, sec. 140. D.S.T. 1,518-26 ft.; rec. 1,050 ft. P.L.O.; set 7-in. csg. 1,526 ft.; comp.; 120 B.P.D.; jetting.
King Drlg. Co. No. 1 Parr, San Andres Gr. Cg. 6,345 ft.
Liberty Oil Co. No. 1 State, Sur. 216. T.D. 1,538 ft.; S.D.
Magnolia Pet. Co. No. 1 Well, Sur. 565. Sd. 2,799-2,812 ft.; tstd. S.W.; D.&A. 4,073 ft.

Frio County

Amerada Pet. Corp. No. 1 Harriman Flores Sur. 306. Lost hole; T.D. 6,410 ft.; set csg. 6,408 ft.; drlg. plugs.
Pagenkoff & Jamieson No. 2 Blackaller, Gourley Sur. 765. Drlg. 2,773 ft.

Goliad County

Goliad Oil Co. No. 2 Cole, lot 33, Goliad Town. Tr. Sur. Set protective csg. 4,500 ft.; to drill ahead.

Guadalupe County

Fair et al No. 1 Hemple, Williams Sur. T.D. 2,076 ft.; S.D.; oil and wtr. in hole.
Lincoln Pet. Co. No. 1 Baenzinger, Mansola Sur. Set csg. 1,990 ft.; drlg. plugs
Tobertson et al No. 1 Blumberg, M. Baker Sur. Drlg. 1,026 ft.
W. S. Townsend No. 1 Terrill, 111-ac. tr. Cg. 2,061 ft.

Jim Wells County

Magnolia Pet. Co. No. 7 Seeligson, 10,433-ac. tr., Los Jaboncillos Gr. D.S.T. 6,005-17 ft.; rec. 35 ft. dist. at 700 lbs.; D.S.T. 6,076-89 ft., rec. 45 ft. mud-cut W. dist. at 750 lbs.; cg. ahead 6,114 ft.

Kendall County

Landon & Peffley No. 1 Seidensticker, Sur. 257, Chorcon Gr. R.U.

LaSalle County

W. H. Vernor No. 1 Las Abras ranch, sec. 726. R.U. to D.D.; T.D. 800 ft.

Lee County

Elaussa Oil Co. No. 1 Saunders, Von Reeder Sur. Set csg. 3,672 ft.; T.D. 3,675 ft.; S.D.
Jas. E. Pederson No. 1 Turner, David Hudson Sur. W.O.; drlg. 6,131 ft.

Live Oak County

Henshaw Bros. & Nelson No. 1 Ulesch, Triplett Sur. No. 150. R.U.
Loma Oil Co. No. 1 Schwartz, McKilley Sur., Abst. 19. Cg. 1,507 ft.

McMullen County

Edwards, Zock et al No. 1 Two Rivers Ranch Co., 150 ft. S and W lines, SE¼, sec. 60. Sd. 1,100-02 ft.; S.O.&G.; cg. ahead.
Harvey & Henderson No. 1 Nueces L. & L. Co., Sur. 105. Drlg. 513 ft.
Howell Oil Corp. No. 1 Martin, Sur. 213. T.D. 2,910 ft.; rng. survey.
W. L. Hinds No. 1 Rhodes, NE¼, NW¼ sec. 54. S.D. 945 ft.; rep.
E. M. Jones No. 5 Ezell, SE¼, sec. 3, Ezell ranch. D.&A. 3,108 ft.
Rowan & Nichols No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. Drlg. 1,811 ft.
Schimmel et al No. 1 Hagist, Sur. 467. R.U.
C. C. Shumway No. 10 Shiner ranch, sec. 51, Shumway Subd. Sd. 1,575-84 ft.; set csg.; W.O.C.

Milam County

Kingdor Expl. Co. No. 1 White, B. Wickson Sur. Drlg. L. 3,589 ft.

Nueces County

J. K. Culton No. 1 Singer, Lot 13, Blk. 39, Encinal Gardens. D.&A. 7,010 ft.
Gillock et al No. 2 Poenisch, Lot 11, sec. 32. Drlg. 1,107 ft.
W. L. Hinds Drlg. & Expl. Co. No. 1 River Bros. 80-ac. tr., sec. 301. Sd. 5,670-90 ft.; S.O.; tstd. S.W.; cg. 5,693 ft.
Seaboard Oil Corp. No. 1-C Chapman, sec. 111, Laurels Farm Lots. Drlg. 4,227 ft.
Seaboard Oil Corp. No. 1 James Luby, Blk. 4, Mary Luby Subd., Petronilla ranch. T.D. 5,333 ft.; set csg. 5,175 ft.; perfg. 5,045-50 ft.; reperf. 5,048-50½ ft.; comp.; 156 B.P.D. on ⅞-in. ck.; perf. 5,048½-50½ ft.

San Patricio County

Danray Oil Co. No. 1 Davis, Tr. 5, Wm. Boyd Sur. 5,256 ft.
Eleanor Oil Co. No. 1 Green Est., 167.4-ac. tr., Williamson Sur.; (W.O.). Old T. D. 6,800 ft.; set 5-in. csg. 7,000 ft.; perf. 6,566-74 ft.; swbg.
Humble O. & R. Co. No. 1 McCampbell 610.62-ac. tr., Martinez Sur. Drlg. hd. sd. 6,727 ft.

Plymouth Oil Co. No. 1-A Odem, subd. 2, A. Herron Sur. Fsg. 5,080 ft.
Wellington Oil Co. No. 1-B Welder, SE¼ sec. 6, Cubage & Miller Subd., Garza Sur. Drlg. 4,097 ft.

Starr County

Calderoni-James-Follette No. 1 Rodriguez Blk. 6, Sh. 56, Porc. 80. Set sur. csg 100 ft.; S.D.
Dancey Oil Co. No. 2 Ramos, Sur. 149. Spd.
Donroy Oil Co. No. 1 Ramon, 2,400 ft SE line, 150 ft. SW line, sec. 150. Cg 1,281 ft.
Gilcrease Oil Co. No. 1 Castillo, Sh. 7-D, Porc. 77. Drlg. 900 ft.
Henry Mode et al No. 1 Kelsey-Bass, Blk 7, Porcs. 86 and 87. S.D. 3,002 ft.
Transwestern Oil Co. and Davenport No. 3 Slick, sec. 527. R.U.

Webb County

Bridwell Oil Co. No. 1 Longorio, Sur. 691. D.&A. 3,602 ft.
Eugene Garner No. 2 Saldivar, Blk. 12 Sur. 567. Oil sd. 997-1,000 ft.; perf. 990-98 ft.; bailing.
Lu Tex Oil Co. No. 2-A Lone Star Constr. Co., Porc. 12. T.D. 3,451 ft.; fsg.
J. W. Magee No. 1 Garcia, Blk. 21, James Subd. R.U.; S.D.
Paul Meaders No. 1 Garcia, Sur. 338. Loc.
J. R. B. Moore No. 1 Slator, Blk. 7½, Slator subd., Borrego Gr. Spdg.
Perkins, Cullen & Achning No. 1 Garza Sur. 711. D.&A. 2,710 ft.

Willacy County

Ruez-Morton, Inc., No. 1 F. Armendias, C Lot 9, Sh. 4, San Juan de Carricitos Gr. Drlg. 537 ft.
Ruez-Morton, Inc., No. 1 Johnson-Stillman, Lot 14, Blk. 25, Sh. 44, San Juan de Carricitos Gr. S.D. 643 ft.

Wilson County

Eckert & Sons No. 1 Rossi, Salina Sur. Drlg. 905 ft.
R. C. Stanley No. 2 Heirholzer, R. Salina Sur. Oil sd. 1,025-30 ft.; drlg. plug.

Zapata County

Allison & Abrams No. 1 Vela, Sur. 249. Drlg. 617 ft.
Gilcrease Oil Co. No. 2 Trevino, Blk. 12, sec. 8, Porc 3. T.D. 2,150 ft.; D.&A.
O. W. Killam No. 1 Brunl, Blk. 83, Rancho Pasture, Borrego Gr. Drlg. 860 ft.
J. O. Sheffield No. 1 Buck, Blk. 15, Sur. 273. Cg. 1,975 ft.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 1-E McCampbell, Lots 1 and 2, Blk. 38. Spd.
Atlantic Ref. Co. No. 1 Scrivener, Lots 11 and 12, Blk. 11. R.U.
Buckingham Oil Co. No. 11-A McCampbell, Lot 7, Blk. 41. Completing.
Buckingham Oil Co. No. 12-A, McCampbell, Lot 7, Blk. 42. Completing.
Buckingham Oil Co. No 4-B McCampbell, Lot 16, Blk. 40. Cg. 7,110 ft.
Buckingham Oil Co. No. 1-C McCampbell, 33.8-ac. tr., Blk. 27. Set surf. csg.; W.O.C.
Collins & Broughton No. 1 McCampbell, Lot 5, Blk. 37 (W.O.). Perf. 7,110-14 and 7,135-38 ft.; tstd. S.W.; S.D.
Landreth Prod. Co. No. 3-A McCampbell, Lot 1, Blk. 40. Sd. 7,110-13 ft.; comp.; 75 B.P.D. on 11/64-in. ck.; T.D. 7,119 ft.
Landreth Prod. Co. No. 4-A McCampbell, Lots 1 and 2, Blk. 39. Drlg. sh. 1,157 ft.
Shasta Oil Co. No. 1 Vaughn, Lot 13, Blk. 10. Drlg. 2,660 ft.

Bateman—Bastrop County

Ralph Ogden No. 10 Riddle, J. Gray Sur. D.&A.; T.D. 2,224 ft.

Plummer—Bee County

Ann Oil Co. No. 2-B Smith, J. R. Johnson Sur. T.D. 3,066 ft.; set csg. 3,054 ft.; drlg. plugs.
El Toro Oil Co. No. 1 Robertson, Thos. B. Barton Sur. D.&A. 3,112 ft.
W. C. McBride, Inc., No. 1-B Plummer, Johnson Sur. Plug perf. 3,057 ft.

West Tuleta—Bee County

Salt Dome Oil Co. No. 1 Tuleta Mercantile Co., sec. 10, Uranga Gr. T.D. 3,065 ft.; set 5-in. csg. 3,030 ft.; W.O.C.

Von Ormy—Bexar County

J. Beard No. 5 Barragan, Simpson Sur. T.D. 665 ft.; comp.; 3½ B.P.D.

Alta Mesa—Brooks County

Standard of Texas No. 5 Mestina, Lease No. 1. Prep. core 5,325 ft.
Standard Oil of Texas No. 2 Garcia, Lse. No. 1. Drlg. 2,453 ft.

Alta Verde—Brooks County

Bishop & Woods No. 1 Maupin, Sur. 311. Set csg. 50 ft.; S.D. 140 ft.; M.I.R.
Lynway Oil Co. No. 1 Singer, Blk. 9, Sur. 436. Sd. 838-43 ft.; D.S.T. rec. 3 jts. oil and 5 jts. S.W.
Dick Young No. 5 Singer, Blk. 12, Sur. 312 (W.O.). T.D. 1,442 ft.; swbg. sd. 1,-440-47 ft.

Branyon—Caldwell County

F. J. Adams No. 3-B Ellison, Jarman Sur. Drlg. 937 ft.
Baker-Freeman No. 1 Corder, J. A. Neill Sur. T.D. 2,115 ft.; comp.; 25 B.P.D. on pmp.
Chiquita Oil Co. No. 6 Robertson, Neill Sur. T.D. 2,198 ft.; rng. csg.
E. H. Graser No. 1 Field, M. C. Dykes Sur. Comp. on pmp.; 40 B.P.D.
Lanning & Coffield No. 3 Corder, J. A. Neill Sur. T.D. 2,214 ft.; comp.; 86 B.P.D.
Lincoln Pet. Co. No. 6-B Branyon, Miller Sur. Comp.; 25 B.P.D.
Lincoln Pet. Co. No. 5 Brown, D. Cooper Sur. T.D. 2,137 ft.; comp.; 30 B.P.D.
R. Mallory No. 2 Brown, J. R. Miller Sur. T.D. 2,224 ft.; comp. on pmp.; no gauge.
B. F. Robinson No. 1 Young, Miller Sur. Set csg. 2,180 ft.; W.O.C.
B. F. Robinson No. 2 Young, J. R. Miller Sur. Set csg. 1,897 ft.; W.O.C.
Rosita Oil Co. No. 1 Lockhart State Bnk., J. Roe Sur. Set csg. 2,004 ft.; T.D. 2,-215 ft.; comp.; 79.2 B.P.D.
Taylor Ref. Co. No. 5-A Branyon, D. Cooper Sur. Fsg. 1,000 ft.
S. M. Vaughy No. 2 Clark, J. Miller Sur. T.D. 2,177 ft.; comp.; 12 B.P.D. on pmp.
S. M. Vaughy No. 5 Flowers, Neill Sur. Comp.; 96 B.P.D.; T.D. 2,162 ft.
W. M. Vaughy No. 6 Flowers, J. A. Neill Sur. Set csg. 1,869 ft.; W.O.C.
R. S. Wyrick No. 3 Magee. Set csg. 2,060 ft.; W.O.C.

Buchanan—Caldwell County

Easton & Manning No. 1 Bozarth, Cannon Sur. T.D. 2,042 ft.; comp.; 20 B.P.D.
Edwill Oil Co. No. 2 Brown, Cannon Sur. T.D. 1,890 ft.; comp.; 250 B.P.D.
Sherman Nelson No. 1 Moore, Clinton Sur. T.D. 2,274 ft.; comp.; est. 500 B.P.D.
R. A. Stamey No. 1 Brown, Cannon Sur. T.D. 2,256 ft.; comp.; est. 100 B.P.D.

Larremore—Caldwell County

Spokane Oil Co. No. 2 Starcke, Crenshaw Sur. Set csg. 1,275 ft.; T.D. 1,282 ft.; comp.; 130 B.P.D.

Luling—Caldwell County

B Albright No. 1 Cosey, Henry Sur. Drlg. sh. 456 ft.
Koening Oil Co. No. 10 Tiller, Henry Sur. Drlg. sh. 823 ft.
Magnolia Pet. Co. No. 15 Tiller, Henry Sur. T.D. Edw. 2,093 ft.; comp.; 538 B.P.D. on pmp.
Millican & Norman No. 2 Tolbert, Henry Sur. Comp.; 65 B.P.D.; T.D. 2,103 ft.
Rio Bravo Oil Co. No. 15 Merriweather, J. Henry Sur. Drlg. 80 ft.

Lytton Springs—Caldwell County

E. R. Cosby No. 1 Allen. D.&A. 1,865 ft.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 5 Hickman, G. Hinds Sur. Set csg. 2,639 ft.; W.O.C.
Pagenkopf & Jamieson No. 2 Hanson, Hinds Sur. Completing Edw. L. 2,652-53 ft.

Charamousca—Duval County

N. V. Duncan No. 10 Worden-Draught, Sur. 151. T.D. 1,523 ft.; comp.; 50 B.P.D.

Colmena—Duval County

Humble O. & R. Co. No. 5-D D.C.R.C., sec. 585. Set csg. 1,432 ft.; comp.; 240 B.P.D.
Humble O. & R. Co. No. 6-D D.C.R.C., sec. 585. Sd. 1,425-45 ft.; comp.; no gauge.
Humble O. & R. Co. No. 7-D, D.C.R.C. Sur. 585. R.U.

Driscoll—Duval County

Continental Oil Co. No. 17-A Sevier, Sur. 448. O.W.W.O.; old T.D. 2,955 ft.; set 5-in. csg. on sd. 3,433-36 ft.; comp.; 144 B.P.D. on ¼-in. ck.

Government Wells—Duval County

Central Prod., Inc. No. 5 Wendt, sec. 43. Sd. 2,447-52 ft.; set 7-in. csg. 2,447 ft.; W.O.C.

Hoffman—Duval County

Cox & Hamon No. 5 Green-Yoakum, Sur. 118. Comp.; 41 B.P.D.; sd. 2,716-17 ft.
Cox & Hamon No. 6 Green-Yoakum, Sur. 118. Comp.; 62 B.P.D.; sd. 2,723-26 ft.
Cox & Hamon No. 10 Green-Yoakum, Sur. 118. Sd. 2,737-38 ft.; rng. tbg.

Labbe—Duval County

Humble O. & R. Co. No. 3 Roos, sec. 119. Set csg. 2,844 ft.; W.O.C.
Humble O. & R. Co. No. 5 Roos, sec. 119. Set csg. 2,822 ft.; comp.; 192 B.P.D. on ¼-in. ck.
Magnolia Pet. Co. No. 6 Labbe Ranch, Sur. 1. T.D. 2,846 ft.; comp.; 480 B.P.D. on ½-in. ck.

Loma Novia—Duval County

F. J. Gravis No. 4 Hahl, Sur. 64. R.U.
Shell Pet. Corp. No. 12 Bishop, Sur. 59. Set csg. 2,546 ft.; comp.; 128 B.P.D.; T.D. 2,570 ft.
Hamill & Smith No. 10-C Hahl, sec. 63. Comp. on pmp.; 42 B.P.D.; sd. 2,565-80 ft.
Texas Co. No. 6-B Ruiz, Sur. 41. T.D. 2,-711 ft.; pmpg.; sanded up.

Lundell—Duval County

Magnolia Pet. Co. No. 2 D.C.R.C. Sur., sec. 58. Drlg. 511 ft.

North Sweden—Duval County

Argo Oil Co. No. 1 Carrillo, NE¼, sec. 9 T.D. 4,760 ft.; set csg. 4,746 ft.; comp; 272 B.P.D. on ⅞-in. ck.
Argo Oil Co. No. 2 Carrillo, E½ SE¼ sec. 9. Set csg. 4,794 ft.; W.O.C.
Argo Oil Co. No. 3 Carrillo, E½ SE¼ sec. 9. Drlg. 3,772 ft.
Argo Oil Co. No. 4 Carrillo, NE¼, sec. 9. Set surf. csg. 515 ft.; W.O.C.
Arkansas Fuel Oil Co. No. 2 Rossi, Blk. 10. Sd. 4,752-70 ft.; drlg. plugs.
Benedum & Trees Oil Co. No. 2 Puig, 750-ac. tr., San Andres Gr. Set csg. 4,755 ft.; T.D. 4,766 ft.; comp.; 110.3 B.P.D. on ½-in. ck.
Benedum & Trees O. Co. No. 3 Puig, 330 ft. N line, 990 ft. W line lease, San Andres Gr. Set csg. 4,794 ft.; drlg. plugs.
Frank Gravis No. 3 Puig, sec. 24, San Andres Gr. Sd. 4,789-4,800 ft.; set csg. 4,800 ft.; drlg. plug.
Frank Gravis Oil Co. No. 1 Puig, sec. 24, Andres Gr. Set surf. csg. 509 ft.; W.O.C.
Navarro O. Co. No. 1 Rossi, Blk. 11, sec. 35. Fsg. 6,161 ft.
Parr Oil Co. No. 2 Puig, 150-ac. tr. Sur 24, Santos Flores Gr. Sd. 4,803-08 ft.; comp.; 117.56 B.P.D. on ⅛-in. ck.
Parr Oil Co. No. 3 Puig, sec. 24. Drlg. 3,-187 ft.
Reynosa Oil Co. No. 2 Wilson, Blk. 9. Sd. 4,752-66 ft.; comp.; 196 B.P.D. on ⅛-in. ck.
Standard of Kansas No. 1 Parr, San Andres Gr. Comp.; 265 B.P.D. on ⅞-in. ck.; sd. 4,738-43 ft.
Standard Oil Co. of Kansas No. 2 Parr, 80-ac. tr., San Andres Gr. Drlg. 2,011 ft.
Standard Oil Co. of Kansas No. 1 Rossi, Blk. 10, S. Flores Gr. Sd. 4,781-95 ft.; set csg. 4,771 ft.; W.O.C.
Standard Oil Co. of Kansas No. 1 Walstad, Lot 9, Sweden Subd. Drlg. 2,250 ft.

Palangana—Duval County

Penn Palangana Oil Co. No. 1 C. K Gravis Sur. 250. Drlg. 4,667 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 18 D.C.R.C., Sur. 100. Comp.; 75 B.P.D. on pmp.; T.D. 2,004 ft.

Seven Sisters—Duval County

Humble O. & R. Co. No. 19 Dowdy, Sur. 272. Set csg. 2,561 ft.; comp.; 447 B.P.D.
Humble O. & R. Co. No. 20 Dowdy-fee, sec. 272. Set csg. 2,557 ft.
Pan American Prod. Co. No. 5-A Welder, Sur. 381. Sd. 2,550-55 ft.; comp.; 96 B.P.D. on ⅛-in ck.
Sun O. Co. No. 1 Rodriguez, 421.7-ac. tr., secs. 221 and 222. T.D. 2,782 ft.; D.&A.
Westheimer & Daube No. 34 Campos, Sur. 224. Sd. 2,691-94 ft.; set csg. 2,652 ft.; W.O.C.

Sweden—Duval County

Hiawatha Oil Co. No. 2 Miller, sec. 24, Santos Flores Sur. Drlg. 5,327 ft.
Hiawatha Oil Co. No. 3 Southland Life, Blk. 15. T.D. 4,996 ft.; rmg.

Thomas-Lockhart—Duval County

Lockhart Bros. No. 1 Parr, Sur. 277. Drlg. 310 ft.

Pearsall—Frio County

Amerada Pet. Corp. No. 1 Halff & Opperheimer (W.O.). Old T.D. 6,312 ft.; perf. 6,280-95 ft.; cleaning hole.
Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.) Set 7-in. protective csg. 10,341 ft.; W.O.C.
Amerada Pet. Corp. No. 1 Kothman, B. L Crouch Sur. (W.O.). Old T.D. 4,370 ft.; T.D. 5,559 ft.; M.I. rot.

Hords Creek—Goliad County

Brown & Wheeler No. 1-D Kaufman, Trevino Sur. Set csg. 4,454 ft.; perf. 4,370-92 ft.; comp.; 5 B.P.D. on ⅛-in. ck.

Slick—Goliad County

Dirks Bros. No. 1 Allen, O. Marshall Sur. Pettus sd. 4,239-54 ft.; T.D. 4,550 ft.; reworking.

Darst Creek Extn.—Guadalupe County

L. D. Denman No. 1 fee, Arrington Sur. Set csg. 2,300 ft.; W.O.C.
Saxet Oil Co. No. 2 Lay, Davis Sur. T.D. 2,780 ft.; straightening hole.

Darst Creek—Guadalupe County

Ramona Oil Co. No. 3 Lay, J. K. Davis Sur. Comp.; est. 100 B.P.H.; chalk 2,292-2,383 ft.; T.D. 2,395 ft.

Manford—Guadalupe County

J. K. Blackmar No. 1 Appling, Hodges Sur. D.&A. 35 ft.

LaBlanca—Hidalgo County

Atlantic Ref. Co. No. 1 Lewis, Blk. 214. Drlg. 6,907 ft.
Dee, Davenport No. 1 Swallow, Blk. 215 Drlg. 7,285 ft.

Samfordyce—Hidalgo-Starr Counties

Graham & Kingwood Oil Co. No. 1 Yturria, Porc. 100. R.U.

Armagosa—Jim Wells County

Tom Graham No. 1 Earhart, John Suggs Sur. T. D. 4,000 ft.; set csg. 3,170 ft.; S.O.; perf. 3,099-3,111 ft.; swbd. S.W.; T.D. 4,000 ft.; perf. 2,173-81 ft.; comp.; 50,000,000 ft. gas; R.P. 900 lbs.

Bentonville—Jim Wells County

Camp. Prod. Co. No. 2-B Pope, N½, sec 13, King Farm Lots. Cg. 5,796 ft.
Texon Drlg. Co. No. 2 Ralston, 990 ft [illegible] line, 330 ft. W line, sec. 17. Set csg. to perf. 4,000 ft.

Sandia—Jim Wells County

Geo. E. Smith No. 3 Wade, 200-ac. tr., Casa Blanca Gr. Drlg. 1,200 ft.

West Premont—Jim Wells County

Graham & Gilcrease Oil Co. No. 2-B Laughlin, Lots 62 and 67, sec. 77; O.W. W.O. Drlg. 3,620 ft.
Graham & Gilcrease No. 4 Laughlin, Lots 94 and 99, sec. 77. Sd. 3,357-71 ft.; clg. in pits.
Homer Presnall No. 1 Haufbauer, Lots 22 and 27, sec. 72. S.D. 3,500 ft.

Kingsville—Kleberg County

Clark & Stilzig No. 3 Kivlin, Blk. 8, sec. 39. R.U.
Clark & Stilzig No. 1 O'Henry, Lot 2, sec. 49. O.W.W.O.; T.D. 2,641 ft.; P.B.; perf. and reperf.; completing.
Humble O. & R. Co. No. 6 Hughes, Blk. 39, Lot 1. Drlg. 1,050 ft.

South Calliham—McMullen County

Harrison & Danvers No. 2 Claunch, M. Hely Sur. Drlg. sh. 827 ft.

Ezzell—McMullen County

Edwin M. Jones No. 6 Ezzell, NW¼ SE¼, Ragland Sur. 20. Drlg. 1,107 ft.

Loma Alta—McMullen County

J. T. Lanier No. 1 Hagist, SE¼, N½, Sur 481. S.D. 1,503 ft.

Agua Dulce—Nueces County

Conroe Drlg. Co. No. 1 Hagan & Stewart, sec. 206, Bishop Subd. Drlg. 3,510 ft.
United Prod. Co. No. 1 Harvey, 1,100 ft. W line, 1,050 ft. N line, tr., M. Garza Sur. Set 5½-in. csg. 7,457 ft.; perf. csg 7,375-84 ft.; flwg. 112 B.P.D. fluid, reported 25 to 30% oil, remainder S.W
T.D. 9,003 ft.; P.B. 7,388 ft.; T.D. 7,-389 ft.; reworking.
United Prod. Co. No. 3-A Rivers, sec. 9, Peters Subd. Drlg. sdy. sh. 6,189 ft.
United Prod. Co. No. 1 Schroeder, sec. 87, Paul Subd., Driscoll ranch. Drlg. plug; surf. csg. 1,510 ft.

Chapman Ranch—Nueces County

Seaboard O. Corp. No. 6 Collins, sec. 38, Laurels Farm Trs. T.D. 6,540 ft.; D.&A.

Flour Bluff—Nueces County

Humble O. & R. Co. et al No. 1 Graham & Moulter, sec. 41. Drlg. sh. 3,160 ft.
Humble O. & R. Co. et al No. 4-B Miller, sec. 48. Drlg. sh. 5,990 ft.
Humble O. & R. Co. et al No. 2-A Kate Ritter, Lot 24, Blk. 55. Drlg. 5,175 ft.
Humble O. & R. Co. et al No. 1 Roberdeau, Lot 8, Blk. 49. Cg. 6,650 ft.
Humble O. & R. Co. No. 3 Robertson, Lot 11, Blk. 56. Perf. 6,633-36 ft.
Humble O. & R. Co. et al No. 4 Robertson, Blk. 56. Drlg. sh. 1,027 ft.
Humble O. & R. Co. et al No. 6 Webb, Lot 8, Blk. 47. Drlg. sh. 3,135 ft.

Luby—Nueces County

Seaboard Oil Corp. No. 1 Schaeffer, Blk. 3, Sh. 2, Luby Subd. Set csg. 1,237 ft.; W.O.C.

Saxet Heights—Nueces County

Wm. Brady No. 1 Whelan, 56.9-ac. tr., Villareal Sur. Sd. 4,025-50 ft.; comp.; 148 B.P.D. on ¼-in. ck.; perf. 4,034-42 ft.
Harrison Drlg. Co. No. 2 Whelan, Villareal Sur. Oil sd. 4,059-64 ft.; set csg. 4,-068 ft.; S.D.
H. M. Reed No. 2 Quinn, 28-ac. tr., Villareal Sur. Perf. csg. 4,072-76 ft.; T.D. 4,120 ft.; rng. tbg.
Ben F. Smith No. 1 Snowden, 13-ac. tr., Villareal Sur. R.U.
S. E. Wilson No. 1 Kaiser, 1¼-ac. tr., Ellendale Gardens No. 1. Fsg. 3,625 ft.

Saxet—Nueces County

Baltic Drlg. Co. No. 6 Harmon, Sur. 416. Comp.; 110 B.P.D. on ⅞-in. ck.; T.D. 6,746 ft.
Bentex Drlg. Co. No. 4 Harmon, 50-ac. tr., Sur. 416. Dpng.; cg. 6,757 ft.
R. B. Bryant No. 1 Cox & Cryder, 20-ac. tr., Gallagher Sur. 166. Set csg. 4,222 ft.; recmtg.
R. B. Bryant No. 2 Frank, Sh. "C," Sur. 416. (W.O.). Stdg. 5,831 ft.
R. B. Bryant No. 6 Harmon, Sur. 416. Sd. 6,922-52 ft.; T.D. 6,970 ft.; sdtrkd.; D.S.
Crown Central Pet. Corp. No. 5 Hunter, Sur. 591. Drlg. 2,480 ft.
Crown Central Pet. Corp. No. 6 Hunter, Sur. 591. Sd. 4,397-4,404 ft.; set csg.; W.O.C.
Crown Central Pet. Corp. No. 8-B Morgan, 80-ac. tr., Sur. 315. Sd. 4,455-60 ft.; set csg.; tstg.
Donico Prod. Co. No. 3 Donigan, 80-ac. tr., sec. 7, Rge. 6. Set csg. 1,085 ft.; W.O.C.
Donico Prod. Co. No. 6 Donigan, 80-ac. tr., sec. 7, Rge. 6. Drlg. below surf. csg.
Donico Prod. Co. No. 7 Donnigan, 60-ac. tr., sec. 7, Rge. 6. Set csg. 4,305 ft.; perf. 4,080-84 ft.; comp.; 196.5 B.P.D. on ⅞-in. ck.
Donico Prod. Co. No. 9 Donnigan, sec. 7, Rge. T.D. 4,501 ft.; perf. 4,450-54 ft.; comp.; 162.36 bbl. on ⅞-in. ck.
Floboots Oil Co. No. 4 Humphries, Stevens Sur. W.O.; old T.D. 5,840 ft.; set csg. 6,982 ft.; completing.
L. Glasscock No. 1-A Johns, McGregor Sur. 582. Set csg. 1,000 ft.; W.O.C.
L. Glasscock No. 1-C Johns, McGregor Sur. 582. Drlg. 4,755 ft.
Tom Graham No. 5 Harmon, 34-ac. tr., Sur. 416. Drlg. 5,520 ft.
Hiawatha Oil Co. No. 11 Hutchins Stillwell, Blk. 34, Sheppard Farm Lots. Cg. 5,527 ft.
Hiawatha Oil Co. No. 12 Hutchins Stillwell, Blk. 34, Sheppard Farm Lots. Drlg. 3,617 ft.
Hiawatha Oil Co. No. 5-A Smith, Blk. 35, Sheppard Farm Lots. T.D. 5,307 ft.; sdtrkd. 4,800 ft.; drlg. 4,911 ft.
Hiawatha O. & G. Co. No. 6-A Smith, Blk. 35, Sheppard Farm Lots. Set csg. 1,-120 ft.; W.O.C.
Hiawatha O. & G. Co. No. 6-B Smith, Blk. 35, Sheppard Farm Lots. Set surf. csg. 1,108 ft.; W.O.C.
Houston Oil Co. No. 4-A Harrell, Blk. 28, Sheppard Farm Lots. Sd. 4,843-48 ft.; set csg., lnr. and screen; completing.
Houston Oil Co. No. 27 Morgan, sec. 7, Rge. 6. Sd. 4,857-60 ft.; set csg. 4,850 ft.; drlg. plugs.
Houston O. Co. No. 6 Walton, Villareal

Sur. Set csg. 4,350 ft.; perf. 4,272-80 ft.; rng. tbg.
H. H. Howell No. 5 Hutchins, 80-ac. tr., Sur. 416. T.D. 6,937 ft.; tstg.
H. H. Howell No. 4 Morgan, sec. 415. Cg. 6,698 ft.
Kepley Prod. Co. No. 5 Donnigan, 100-ac. tr., sec. 7, Rge. 6. Cg. sd. 4,428 ft.
Morgan & Chapman Minerals Corp. No. 7 Morgan, NE¼, Sur. 405. Sd. 6,690-6,708 ft.; tstd. oil; set csg.; perf. 6,700-03½ ft.; reperf. 6,701-04 ft.; comp.; 129 B.P.D. on 9/64-in. ck.
Phillips Pet. Co. No. 1 Frank, 27.5-ac. tr., Sur. 500. Set csg. 5,864 ft. Perf. 5,775-78 ft.; comp.; 21 bbls. dist. on ¼-in. ck.
Phillips Pet. Co. No. 6 Hutchins, Blk. 29, Sheppard Farm Lots. Drlg. 1,778 ft.
Phillips Pet. Co. No. 3 Perkins-LaGasse, 40-ac. tr., Stevens Sur. A-406. Sd. 6,900-51 ft.; set csg. at T.D., 7,101 ft.; W.O.C.
Port O. & G. Co. No. 3 Cox & Cryder Sd. 3,814-28 ft.; set csg. 3,851 ft.; stdg.
Potter & Snowden No. 1 Taggert, Blk. 5, Sur. 401. S.D. 6,004 ft.
Renwar & Maryland No. 1-A Rand Morgan, Sur. 415. O.W.W.O.; old T.D. 5,825 ft. Sd. 6,687-92 ft. Tested high grav. oil; fsg. 6,865 ft.
Richardson Pet. Co. No. 2 Erwin, Sur. 500. Set csg. 6,956 ft.; perf. 6,921-26 ft.; cleaning.
Richardson Pet. Co. No. 10 Quiros, Blk. 36, Sheppard Farm Trs. Drlg. 3,045 ft.
Richardson Pet. Co. No. 7 Sedwick, 124-ac. tr., Sur. 311. T.D. 6,374 ft.; twisted D.S.; sdtrkd. 6,241 ft.
Richardson Pet. Co. No. 8 Sedwick, 184-ac. tr., Sur. 312. Drlg. 4,674 ft.
Richardson Pet. Co. No. 9 Sedwick, Dunn Sur. 312. Cg. 4,797 ft.
Shell Pet. Corp. No. 5 Fiato, Blk. 3, Sheppard Farm Lots. Set csg. 4,546 ft.; comp.; 139 B.P.D. on 5/32-in. ck.; sd. 4,537-45 ft.
Southern Minerals Corp. No. 4 Elder, 60-ac. tr., Villareal Gr. Sd. 4,874-81 ft.; set 7-in. csg.; W.O.C.
Southern Minerals Corp. No. 4 Harrell, Blk. 19, Sheppard Farm Lots. Set 10-in. csg. 1,115 ft.
Southern Minerals Corp. No. 6 Isensee, Sur. 404; (W.O.). T.D. 6,412 ft.; recmtg. perf. 5,840-42 ft.
T. & T. Oil Co. No. 4 Cain & Sechrist, Blk. 23, Russell Farm Lots. Drlg. 2,911 ft.
Texon Drlg. Co. No. 8 Kocurek, 156-ac. tr., Sur. 316. Cg. 4,565 ft.
Texon Drlg. Co. No. 10 Ocker, Surs. 402 and 316. Sd. 4,428-36 ft.; comp.; no gauge.

Stratton—Nueces County

Camp Prod. Co. No. 2 Wardner, sec. 13, Stratton Sub. Set csg. 1,088 ft.; W.O.C.

Sullivan—Nueces County

Lockhart et al No. 1 O. Purl, Lot 2, sec 7, Ross Peters Subd. No. 2. Sd. 7,032-52 ft.; tried to blow out; D.S. stuck; killed to rework.

Midway—San Patricio County

Humble O. & R. Co. No. 1 Baldwin, T. T. Williamson Sur. R.U.
Plymouth Oil Co. No. 78-C Welder, sec. 70. M.I.M.
Plymouth Oil Co. No. 79-C Welder, sec. 70. M.I.M.
Sun Oil Co. No. 3 Roundtree, sec. 34, Lot 4. R.U.

Taft Field—San Patricio County

Humble O. & R. Co. No. 25 Mayo, Ottman Sur. Sd. 4,349-62 ft.; set 5½-in. csg.; W.O.C.

White Point—San Patricio County

Pan American Prod. Co. No. 1 White Point Dev. Co., 100-ac. tr., Wm. Bell Sur. Drlg. 5,846 ft.

Barbacoas—Starr County

K. E. Merren No. 1-A S.C.C.C., Blk. 34, Lambeth Subd., Porc. 89. Set csg. 5,417½ ft.; shut in; W.O. equip.; C.I.C.P. 2,560 lbs.; flowed 25 B.P.D. dist. on 5/32-in. ck.; sanded up; fsg. 5,417 ft.

Los Olmos—Starr County

R. M. Mitchell No. 1 Bass, Blk. 6, Sur. 8. Drlg. 286 ft.

Ricaby—Starr County

Carter-Stiernberg No. 1 Vela, Lot 1, Blk. 4, El Tanque Subd., Porc. 84. Drlg. 1,766 ft.
Carter & Stiernberg No. 2 Vela, Porc. 85. S.D. 1,615 ft.
Sioux Oil Co. No. 4 Ricaby, Porc. 83. Fsg. 1,896 ft.

El Tanque—Starr County

Dodd, Trustee No. 4 Wood Est., Porc. 84. Comp.; 200 B.P.D.; sd. 1,740-1,826 ft.
Sun Oil Co. No. 2 Wardner, W 2/7, Porc. 84. T.D. 1,772 ft.; set csg. 1,765 ft.; tstg.

Roma—Starr County

Texas Co. No. 6-A Guerra, Sh. 305-D, Porc. 67. Drlg. hd. sd. and sh. 1,430 ft.

Bruni-Cole—Webb County

Bishop Oil Co. No. 2 Bruni, Blk. 18, Sur. 8. D.&A.; T.D. 3,462 ft.
Bridwell O. Co. No. 1 Benavides, Sur. 691. T.D. 3,610 ft.; D.&A.
Cole Pet. Co. No. 100 Benavides, Blk. 11, sec. 412. D.&A. 2,930 ft.
J. B. Cutbirth No. 1 Bruni, Blk. 5, Sur. 8. Drlg. 2,287 ft.
Highland Oil Co. No. 3-B Bruni, Surs. 7 and 8. D.&A. 3,440 ft.
O. W. Killam No. 54 Bruni, Blk. 14, sec. 8. T.D. 3,437 ft.; comp.; 10 B.P.D.
O. W. Killam No. 55 Bruni, Blk. 9, Sur. 8. R.U.
Magnolia Pet. Co. No. 45 Benavides, Blk. 47. Cg. 3,618 ft.
L. H. Pitkin No. 1 Bruni, Blk. 4, Sh. 8. D.&A. 3,436 ft.

Killam—Webb County

C. H. Bailey No. 2 Garcia, Sur. 768. T.D. 2,045 ft.; comp.; 100 B.P.D. on pmp.
Humble O. & R. Co. No. 3 Laurel Bros., Sur. 333. T.D. 2,030 ft.; W.O. pmp.
O. W. Killam No. 3 Laurel, Blk. 21, Sur. 333. Drlg. 89 ft.
Humble O. & R. Co. No. 4 Laurel, Sur. 333. Drlg. sh. 50 ft.
O. W. Killam No. 7 Garcia, N½ Sur. 786. Drlg. 810 ft.
O. W. Killam No. 10 Garcia, Sur. 786. Drlg. 711 ft.
Eugene Mays No. 2 Garcia, 120-ac. tr., Sur. 786. Sd. 2,036-42 ft.; D.&A.

Lopez—Webb-Duval Counties

C. H. Lewis No. 10 Lopez, Sur. 110. Comp. 60 B.P.D. on ⅜-in. ck.; sd. 2,293-97 ft.
Valley Osage Oil Co. No. 5 M. Billings, Sur. 109. R.U.

O'Hern—Webb County

Magnolia Pet. Co. No. 2 Benavides, Sur. 172, Garza Sur. D.&A. 3,148 ft.
Magnolia Pet. Co. No. 8 Benavides, Blk. 32, O'Hern Subd. Cg. 4,017 ft.
J. J. O'Hern No. 6-C Benavides, Blk. 30, O'Hern Subd. Sd. 2,817-39 ft.; comp.; 40 B.P.H.
J. J. O'Hern No. 7-C Benavides, Blk. 24. Cg. 2,385 ft.
Peggy-Sue Oil Co. No. 2 Benavides, Blk. 23. D.&A. 2,977 ft.
Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.
Sun Oil Co. No. 1-A Benavides, Blk. 10, Hale Subd. D.&A. 3,476 ft.
Sun Oil Co. No. 12 Benavides, Blk. 509. Drlg. 255 ft.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 1 Yturria, Sh. 64, Carricitos Gr. (W.O.); set csg. 7,630 ft.; T.D. 10,286 ft.; P.B. 7,556 ft.; milling junk.

Byersville—Williamson County

Ben Pearce No. 5 Mattick, H. White Sur. Drlg. top Serp. 900 ft.; T.D. 928 ft.; comp.; 16 B.P.D. on pmp.

Escobas—Zapata County

Earl Calloway No. 7 Bustamente, Sh. 8, Fansler Part. T.D. 1,320 ft.; comp.; 45 B.P.D.
Cron & Gracey No. 9 Garza, Blk. 10, Douglas Subd. Comp.; 30 B.P.D.; T.D. 1,347 ft.
Nordan & Morris No. 26 Bustimente, Sh. 33, Fansler Part. T.D. 1,207 ft.; comp.; 23 B.P.D.
Nordan & Morris No. 27 Bustimante, Sh. 33, Fansler Part. Comp.; 30 B.P.D.; T.D. 1,180 ft.
Nordan & Morris No. 28 Bustimante, Sh. 33, Fansler Part. Comp.; 24 B.P.D.; T.D. 1,158 ft.
Nordan & Morris No. 29 Bustimante, Sh. 33, Fansler Part. T.D. 1,121 ft.; W.O. P.E.
Nordan & Morris No. 30 Bustimante, Sh. 33, Fansler Part. R.U.
Starr Dev. Co. No. 1 Garza, Blk. 34, Douglas Subd. D.&A. 1,865 ft.
Texas Co. No. 102 Jennings, Cerrito Blanco Gr. Set csg. 1,220 ft.; W.O.C.

NORTH TEXAS WILDCATS

Archer County

Bridwell Oil Co. No. 1 Oil Inv. E, sec. 125, Harris Sur. Spdg.
O. P. Darsey No. 1 J. T. Longley, sec. 1839, T.E.&L. Sur. Drlg. 920 ft.
J. G. Steele No. 1 J. H. Garvey, T.E.&L. Sur. 1,855. Drlg. 766 ft.

Clay County

Foster Minerals Corp. No. 1 V. H. Yarbrough, M. Lassiter Sur. A-288. Fsg. 2,990 ft.
W. Gant No. 4 C. M. Worsham, sec. 38, G. P. Meade Sur. Drlg. 2,000 ft.
Sussex Oil Corp. No. 1 C. J. Shumake, H. Frost Sur. A-151. Tstg. S.S.O. 1,126-45 ft.

Collin County

F. Jones No. 1 Sherley, G. Morrison Sur. S.D.O. 3,003 ft.

Cooke County

Benton & Holmes No. 1 Gibson, J. English Sur. A-345. Spd.
Kiel & Kiel No. 1 Sears, Barnett Sur. Spd.
L. A. McWhirter, tr., No. 1 W. J. Davidson, Geo. Dooley Sur. A-301. Fsg. 600 ft.
Seitz Comegys & Seitz No. 1 E. J. Dougherty, J. N. Harris Sur. A-1204. Drlg. 1,350 ft.
J. G. Richards et al No. 1 J. A. Yosten, T. Scott Sur. A-90. Fshg. one joint pipe.
Whitfield, Pearson & Grimes No. 1 C. F. Bundy, P. P. Cary Sur. A-1239. S.D.O.
Texas Co. No. 1 J. F. Marshall, A. Burns Sur. A-49. Drlg. 3,900 ft.

Denton County

California Ref. Co. No. 1 W. & S. Life Ins. Co., B.B.B.&C. Sur. A-783. S.S.O. 1,461-65 ft. 6⅝-in. 1,460 ft., W.O.C.
Manning & Moore No. 1 Dora Ratchford, J. Walters Sur. T.D. 2,102 ft.; recmtg. 6⅝-in. 1,910 ft.
Regan & Davis No. 1 Williams, M.E.P.&P. Sur. A-927. Cem. surf. pipe and S.D.O.

Foard County

O. P. Burnham No. 1 Ward, sec. 21, H.& T.C. Sur., Blk. 8. S.D. for wire line.

Grayson County

Denver P. & R. Co. No. 1 Cannon, A. Berry Sur. A-130. Spd.
Mildred Oil Co. No. 1 F. R. DeCordova, H. Stewart Sur. A-1072. Drlg. 3,000 ft.

Montague County

Montague Oil Co. et al No. 1 J. A. Brite, sec. 2882, T.E.&L. Sur. Move in rotary.
J. W. Sorrell et al No. 1 J. E. Walthall, S. H. Smith Sur. A-662. S.D. 2,000 ft.
Ventex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. Repairing boilers; T.D. 3,220 ft.

Wichita County

Golding & Cochran No. 1 Mrs. Grace Jennings, sec. 12, H.T.&B. Sur. Spdg.
Jones & Cowden No. 1 Perkins & Cullum, sec. 21, D.C.S.L. Sur. Drk.
LeBus No. 1 J. F. Miller, W. R. Eaves Sur. A-447. Drk.
Morgen & Anderson No. 1 C. A. Mertins, sec. 2, G.C.&S.F. Sur. Pulling on 5-in. csg. stuck at 1,575 ft.
W. B. Omohundro No. 1 J. A. Kemp, Blk. 52, W.V.F.L. Sur. Loc.

Wilbarger County

J. B. Baker, Jr., No. 1 Waggoner A, sec. 7, H.&T.C. Sur., Blk. 4. Drlg. 2,140 ft.
Barry & Hayes No. 1 McGill, sec. 3, Blk. 9, H.&T.C. Sur. Drlg. 900 ft.
W. W. McDonald No. 3 Waggoner A, sec. 26, H.&T.C. Sur. Testing lime 3,638-54 ft. with acid.

Wise County

Latex Oil Co. No. 1 C. R. Smith, J. Couch Sur. A-104. Drlg. 3,300 ft.

Young County

F. W. Bennett No. 1 R. V. Tidwell, J. L. Blackwood Sur. A-1378. Tstg. S.S.O. 3,370-83 ft.
H. J. Cox No. 1 W. T. Donnell, J. M. Smith Sur., sec. 1-7-1879. S.D.O. 1,810 ft.
Hickok et al No. 1 A. P. Martin, V. H. Twilliger Sur. A-1883. Tstg. sd. 2,103-18 ft.
T. D. Humphrey No. 1 S. R. Ragland, T. B. Kuykendall Sur. Spdg.
Lupton & Long No. 1 W. I. Gilmore, J. Gilmore Sur. A-2135. Drlg. 1,625 ft.
Pitzer & West No. 1 Norton "B", sec. 615, T.E.&L. Sur. Drlg. 3,300 ft.
H. Zweifel No. 1 E. S. Graham, B.S.&F Sur. A-44. S.L. 3,483-96 ft.; flwd. 150 bbls. ;tstg.
H. Zweifel No. 1 R. D. Sewell, M. Case Sur. A-1402. Drlg. 4,030 ft.

E. C. TEXAS WILDCATS

Anderson County

Humble O. & R. Co. No. 1 Mrs. S. Hassell, J. Beard Sur., 2 mi. N of Jarvis. Drk.

Angelina County

Plaza Oil Co. No. 1 J. L. Russell, 150 ft. N and 300 ft. E of W 50 of S 100 acres of N 153 acres, J. Morine Sur., 3 mi. E of Dibol. Drk.

Bowie County

Chew & Bassett No. 1 Barkman. S.D. 2,851 ft.
Ferguson & Hill No. 1 Breckenridge. S.D. 2,765 ft.
Woodley & Bently No. 1 Lumpkin, S.D. 4,622 ft.

Falls County

E. B. Collard et al No. 1 P. Neikamp, W. Hampton Sur., 3 mi. E of Lott. S.D. 280 ft.

Freestone County

Pansey Oil Co. No. 1 R. B. Longbotham, 330 ft. N and W, in NW part of Wortham, in G. E. Weaver Sur. Loc.
C. E. Rossiter No. 1 J. P. Fulton in J. P. Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.
Stroude et al No. 1 P. Mullens, R. D. Sloan Sur., 6 mi. NE of Fairfield. T.D. 341 ft.

Henderson County

R. J. Paschal No. 1 H. M. Wilson, Thos. Caro Sur., 4½ mi. N of Malakoff. Loc.
Tide Water Assoc. et al No. 2-C McElreath & Suggett. W. P. Wyche Sur. Top Woodbine 4,450-70 ft.; Georgetown 5,070 ft.; drlg. 6,280 ft.

Houston County

American Liberty Oil Co. No. 1 W. L. Moody, S. E. Parker Sur., 1½ mi. NW of Grapeland. Tstg. 6,169 ft.

Hunt County

Stanolind O. & G. Co. No. 1 J. P. Hawks, R. Ragsdale Sur., near Campbell. Travis Peak 5,965 ft; T.D. 6,570 ft.; cutting off drill pipe at 5,710 ft.

Limestone County

Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. Top Anhy. 5,000 ft.; coring 5,970 ft.

Navarro County

T. Sharpe et al No. 1 E. B. McDowell, 600 ft N and 150 ft E of 65-ac. lse., T. Jordan Sur., ½ mi. S of Bazzett. W.O.C. 65 ft.

Red River County

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. Drlg. 425 ft.
Texas Trading Co. No. 1 Southern Pine Lbr. Co., D. Burton Sur., 12 mi. N of Clarksville. R.U.

Rusk County

Barnett Pet. Corp. No. 1 S. C. Sanford W. A. Corder Sur., 10 mi. E of Mt. Enterprise. Georgetown 3,275 ft.; drlg. 5,650 ft.
General Crude and others No. 1 Bivins Est., R.U. R. Williams Sur., 6 mi., N of Latum. Drlg. 4,155 ft.
J. Merrick et al No. 1 Tipps, T. Uzzell Sur., 6 mi. S of East Texas field. Top sd. 3,886 ft.; S.D. 3,890 ft.
Nivla Oil Co. No. 1 Citizens Natl. Bank, M. D. Carmel Sur. 2½ mi. SE of Henderson. Drlg. 2,650 ft.
J. W. Shipman et al No. 1 Citizens Bank, J. J. Y'Barbo Sur., 4 mi. NE of Henderson. S.D. 4,340 ft.

Upshur County

F. W. Maddox No. 1 S. T. Buie, J. M. Dunn Sur., 4 mi. E of Gilmer. Austin 3,629 ft.; top Woodbine 3,717 ft.; T.D. 3,751 ft.; to P.B. and perf.

Van Zandt County

Humble O. & R. Co. No. 1 L. K. Riggs, W. Daniels Sur. Coring 6,115 ft.

EAST TEXAS

(Border Counties)

Bowie County

Sutton & Hawkins No. 1 D. L. McDuffey, John Bell Sur. T.D. 6,010 ft.; D.&A.
Woodley & Bentley No. 1 J. D. Lumpkin, J. McDermott Sur. T.D. 4,505 ft.; prep. core.

Cass County

American Lib. Oil Co. No. 2 E. T. Tyson, Cass Sch. Ld. Sur. Comp.; flw. 298 B. P.D.; T.D. 6,040 ft.
Bay Oil Corp. No. 1 W. R. Cobb, G. Crowder Sur. Drlg. 4,353 ft.
Bay Oil Corp. No. 1 W. B. Parker, G. Crowder Sur. Drlg. 4,986 ft.
G. H. Chamblee No. 1 Collett, J. S. Smith Sur., 20-ac. tr. Drlg. 5,968 ft.
Magnolia Pet. Co. No. 3 W. M. Hall, Wilson Robinson Sur. Drlg. 5,282 ft.
Magnolia Pet. Co. No. 7 W. M. Hall, J. N. Jackson Sur. Drlg. 6,040 ft.
Magnolia Pet. Co. No. 18 L. Haywood, P. Evans Sur. Tstg.
R. W. Norton No. 4 Davis, H. Holbert Sur. Drlg. 2,800 ft.
R. W. Norton No. 1 Hussey, P. Evans Sur. R.U.
R. W. Norton No. 5 J. T. Moore, J. S. Smith Sur. Comp.; flw. 317 B.P.D.; T.D. 6,004 ft.
R. W. Norton No. 8 Davis, H. Holbert Sur. Drlg. 3,020 ft.
R. W. Norton No. 1 W. & E. Starke, Dudley Gilliam Sur. Drlg. 4,810 ft.
R. W. Norton No. 2 W. and E. Starke, D. Gilliam Sur. Drlg. 2,903 ft.
Ohio Oil Co. No. 19 R. P. Willis, S.F.I.W. Sur. Drlg. 5,735 ft.
W. G. Ray Drlg. Co. No. 2 Parker, G. Crowder Sur. Drlg. 4,185 ft.
United Prod. No. 2 Allday, 87-ac. tr. Comp.; flw. 15 B.P.H.; T.D. 5,920 ft.
United Prod. Co. No. 3 Allday, P. Evans Sur. Drlg. 5,466 ft.
United Prod. Co. No. 4 Allday, P. Evans Sur. R.U.
United Prod. No. 6 Baugus Unit R. Tramel Sur. T.D. 5,920 ft.; D.&A.
United Prod. Co. No. 1 fee, H. Holbert Sur. Drlg. 2,968 ft.
United Gas No. 1 Threwer, J. S. Smith Sur. T.D. 6,040 ft.; S.D.; W.O.

Harrison County

Gever Oil Co. No. 2-B Vincent, Davenport Sur. Comp.; pmp. 6 B.P.D.; T.D. 2,392 ft.

Marion County—Rodessa

Arkansas-La. Gas Co. No. 1 Allen Houston, A. D. S. Coy Sur. 7-in. 6,035 ft.; T.D. 6,076 ft.; W.O.C.S.
Arkansas-Louisiana No. 1 C. C. Braden T. Hanson Sur. Comp.; 5,000,000 ft. gas; T.D. 5,972 ft.
Arkansas-La. Gas Co. No. 1 J. P. Fant, L. P. Cadenhead Sur. Drlg. 4,008 ft.
Fohs Oil Co. No. 1 Mary Reynolds, A. D. S. Coy Sur. Drlg. 5,086 ft.
Hunter Co. No. 2 Fonda, A. D. S. Coy Sur. Comp.; flw. 30 B.P.H.; T.D. 6,095 ft.
Mid-Continent Pet. Corp. No. 1 Sory, A. D. S. Coy Sur. Drlg. 5,836 ft.
United Prod. Co. No. 1 Hutchinson, A. D. S. Coy Sur. Drlg. 2,872 ft.

Panola County

Glassell & Glassell No. 1 Pierce & Chesbro, Julia Soape Sur. Cg. 5,888 ft.
Magnolia Pet. Co. No. 2 E. A. Hull, Thos. Applewhite Sur. Cg. 6,448 ft.

Shelby County

Wm. Redditt No. 1 Pickering Lbr. Co., SE cor. Stephens English Sur. T.D. 4,108 ft.; acd. 2,000 gals.; prep. set csg.; gas flow about 4,000,000 ft. per day.

WEST TEXAS WILDCATS

Andrews County

Amerada Pet. Corp. No. 1 L. Lippman, sec. 6, Blk. A-29, P.S.L. Sur. T.D. 4,401 ft.; P.B. to 4,391 ft. Tstg.
American Liberty O. Co. No. 1 E. Cowden, 660 ft. N and 1,980 ft. W, sec. 14, Blk. A-55, P.S.L. Sur. Drlg. 1,820 ft.
W. G. Blanchard et al No. 1 Cox, C SW sec. 4, Blk. A-30, P.S.L. Sur. Drlg. 3,116 ft.
M. J. Delaney No. 1 E. P. Moore, 440 ft. S and 2,200 ft. W, sec. 12, Blk. A-20, P.S.L. Sur. Drlg. 138 ft.
Drlg. & Expl. Co. No. 1 Thornberg, sec. 8, Blk. A-42, P.S.L. Sur. Loc.
Empire O. & R. Co. No. 1 Biles, sec. 12, Blk A-31, P.S.L. Sur. Coring 4,850 ft.
M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. R.U.
Sinclair Prairie Oil Co. No. 1 Emma Cowden, sec. 11, Blk. 44, Twp. 2n, T.&P. Sur. Fsg. 4,070 ft.
Hargrove et al No. 1 Riordan, NW¼, sec. 10, Blk. A-44, P.S.L. Sur. Top Salt 2,080 ft.; S.D. 3,200 ft.

Humble O. & R. Co. No. 2 Walker, sec. 6, Blk. A-43, P.S.L. Sur. Drlg. 4,370 ft.
Landreth Prod. Co. No. 1 L. Jones, sec. 11, Blk. A-42, P.S.L. Sur. Fsg. 4,416 ft.

Bailey County

Etz & Robinson No. 1 Enochs, Tract 66, League 182, Floyd Co. School Lands Sur. R.U. mach.
E. L. Wilson et al No. 1 Yellow House Land Co., Labour 4, Abner Taylor Lge. 700. Elev. 3,687 ft.; T.D. 4,497 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. Fsg. 5,045 ft.
Storey No. 1 Wilson, sec. 3, Blk. 212, T.& St.L. Sur. Drlg. 2,412 ft.

Cochran County

Ingleright & Fogelson No. 1 Houston, W.O.C. 4,807 ft.
Pete Wiggins et al No. 1 C. Slaughter Dean. C Lab. 26, League 92, Lipscomb C. Sch. Ld. W.O.C. 225 ft.

Coke County

H. E. Ogden et al No. 1 Rawlins, sec. 390, Blk. 1-A, H.&T.C. Sur. S.D. 515 ft.
Plymouth Oil Co. No. 1 Mrs. Mary Hanna, sec. 252, Blk. LA, H.&T.C. Sur., 1½ mi. SW of Blackwell. Drlg. 3,207 ft.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 9 Blk. B-21. Drlg. 5,404 ft.; P.B. 3,510 ft.; W.O.C.

Crockett County

R. H. Henderson No. 1 C. B. Haun et al. T.D. 530 ft.; straightreaming.
Moore Bros. No. 1 P. Perner. M.I.M.
Superior Oil Co. of Calif. No. 1 J. S. Todd, C SE¼ sec. 55, Blk. UV, G.C.&S.F. Sur. Drlg. 6,845 ft.

Dawson County

R. Allbaugh No. 1 Higgenbotham, Labour 24, League 269, Moore Co. Sch. Lds. Loc.
R. Albaugh No. 1 D. Hogg, SE of SE sec. 17, Blk. 34, 4n, T.&P. Sur. Loc.
E. L. Wilson No. 1 Scanlon. Sec. 83, Blk M. E.L.R.R. Sur. Drlg. 2,222 ft.

Dickens County

C. E. Litchfield No. 1 Harris, 1,980 ft. S and 230 ft. E, sec. 354, Blk. 1, H.&G.N. Sur. Drlg. 520 ft.

Edwards County

A. P. Carter No. 1 F. D. Sweeten, S&E sec. 48, Blk. 2, B&B Sur., 1½ mi. E of Rock Springs. S.D. 700 ft.

Ector County

Fuhrman Pet. Corp. No. 1 E. Cowden, sec. 41, Blk. 43, Twp. 2s, T.&P. Sur. M.I.M.
Phillips Pet. Co. No. 1 Gist, 1,980 ft. N and 660 ft. W, sec. 2, Blk. 42, 2s, T.&P. Sur. M.I.R.
Shasta Oil Co. No. 1 K. Sands, sec. 32, Blk. 44, T.&P. Sur. Loc.

Fisher County

Anderson & Kerr No. 1 Caldwell, 680 ft. S and 1,780 ft. W, sec. 169, Blk. 2, H.& T.C. Sur. Loc.
Lewis Prod. Co. No. 1 Marrow, 330 ft. N and W, sec. 172, Blk. 2, H.&T.C. Sur. R.U.R.
Southern Oil Co. No. 1 Robinson, sec. 172, Blk. 2, H.&T.C. Sur., 2½ mi. NE of Raton. T.D. 3,505 ft.; set csg.
Tide Water Associated Oil Co. No. 1 Joe Robinson, W½ NE¼ sec. 172, Blk. 2, H.&T.C. Sur. Set csg. 3,505 ft.

Gaines County

Amerada Pet. Corp. No. 1 A. Faskin, sec. 160, Blk. G. W.T.R.R. Sur. Drlg. 5,050 ft.
Amerada Pet. Corp. No. 1 Matthews, sec. 417, Blk. G, C.C.S.D.&R.G.N.G. Sur. Drlg. 3,873 ft.
Argo Royalty Co. No. 1 Jones. Drlg. 3,-353 ft.
Carter et al No. 1-B Wasson, sec. 47, Blk. AX, P.S.L. Sur. Drlg. 2,110 ft.
A. G. Carter et al No. 1 Moore-Langdon, sec. 44, Blk. A, P.S.L. Sur. Drlg. 4,-450 ft.
Continental O. Co. No. 1 Jones, sec. 22, Blk. A-7, P.S.L. Sur. W.O.C. 4,838 ft.
Continental Oil Co. No. 1 Moore, sec. 46, Blk. AX, P.S.L. Sur. T.D. 1,038 ft.; pulling csg.
T. N. Sloan et al No. 1 Barber, NE cor. sec. 19, Blk. A-28, P.S.L. Sur. Sul. wtr. 4,725-28 ft.; drlg. 4,751 ft.

Garza County

S. Caprito No. 1 Post Estate, sec. 230, Blk. 5, K. Aycock Sur. T.D. 3,608 ft.; P.B. to 3,150 ft.; S.D.

Glasscock County

Moore Bros. No. 1 King, sec. 46, Blk. 36, Twp. 1s, T.&P. Sur. Drlg. 1,682 ft.

Hockley County

Frank A. Bates No. 1 Lockett, C of NE of SW sec. 5, Blk. 1, P.S.L. Sur. Loc.
R. F. Duggan et al No. 1 Yellow House Land Co., cen. Labour 11, League 718 State Capitol Lds. W.O.C. 4,100 ft.
Stanolind O. & G. Co. No. 1 A. A. Slaughter, C SW¼ Labour 76, League 37. Zavalla Co. Sch. Lds. Sur. Drlg. 3,026 ft.

Howard County

Iron Mt. Oil Co. No. 1 D. H. Snyder, sec. 28, Blk. 30, Twp. 1s, T.&P. Sur. T.D. 1,550 ft.; C.O. and bailing.
W. F. McDermott et al No. 1 Lucas, sec. 18, Blk. 29, Twp. 1n, T.&P. Sur., 5 mi. N of Dodge pool. R.U.S.T.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Cmtd. csg.; T.D. 3,076 ft.

Jeff Davis County

H. D. Wilcox et al No. 1 Jones-Coffield. Drlg. 1,850 ft.

Loving County

Barnett Pet. Co. No. 1 Johnson, sec. 2, Blk. 57, Twp. 1, T.&P. Sur. S.D.
Barnett Pet. Corp. No. 2 W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Drk.
Finley et al No. 1 W. D. Johnson, sec. 24, Blk. 56, Twp. 1, T.&P. Sur. Top sand 3,614 ft.; T.D. 3,670 ft.; C.O.; 400 ft. O.I.H.; to deepen.
Woodley Pet. Co. No. 1 Kloh, sec. 21. Blk. 55, Twp. 1, T.&P. Sur. T.D. 1,150 ft.; P.B. 706 ft.

Mitchell County

Grisham-Hunter Corp. No. 1 Morrison, sec. 34-29-1n, T.&P. Sur. Drlg. 2,644 ft.
Harris & Anderson No. 1 A. F. King, 660 ft. from N and W, sec. 11, Blk. 28, Twp. 1s, T.&P. Sur. R.U.S.T.
Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36, Blk. 29, Twp. 1n, T.&P. Sur. Drlg. 2,100 ft.

Pecos County

Cannon & Cannon No. 1 University, sec. 2, Blk. 20. Drlg. 1,043 ft.
Dobbs No. 1 University, sec. 30, Blk. 18. Drlg. 1,727 ft.
Humble O. & R. Co. No. 1 E. M. Gray, sec. 94, Blk 11, G.H.&S.A. Sur.; 5,000-ft. test. Top Del. L. 5,010 ft.; drlg. 6,130 ft.
K. Kimberlin No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. Drlg. 1,151 ft.
Phillips Pet. Co. No. 1 Grierson, sec. 71, Blk. QW, T.C.R.R. Sur., 10 mi. NW of Fort Stockton. R.U.R.
G. J. Smith No. 1 W. E. Smith, sec. 37, Blk. 1, I.&G.N. Sur. Drlg. 1,509 ft.
Tex-Mex Pet. Co. No. 1 Williams, sec. 79½, Blk. 8, H.&G.N. Sur. Drlg. 1,822 ft.
S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. S.D. 5,268 ft.
Trans-Pecos Oil Co. No. 1 Gallagher, sec. 9-51-10, T.&P. Sur. S.D. 1,475 ft.
Trans-Pecos Oil Co. No. 1 Popham. S.D. 535 ft.
Young No. 1 Perry, sec. 3, Blk. Z, T.C. R.R. Sur. Drlg. 1,823 ft.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. T.D. 3,575 ft.; C.O.
A. H. Main No. 1 Greenlee, sec. 40. Blk. 347, 13 mi. NE of Marfa. No report.
Sadler Bros. et al No. 1 Bagley. S.D. 3,315 ft.

Reagan County

K. E. Sherman No. 1 W. E. Friend, SW cor. sec. 3, Wm. Allen Sur. S.D. 1,064 ft.
Moore Bros. No. 1 University, sec. 8, Blk. 7. Spudded and S.D.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur., 12 mi. NW of Toyah. Drlg. 500 ft.
General Crude Oil Co. No. 1 T. P. Land Trust, C NE¼ sec. 15, Blk. 56, Twp. 2, T.&P. Sur. Drlg. 1,111 ft.

Runnels County

Hall Oil Co. No. 1 Beddo, sec. 51, Thompson Casey Sur. R.U.R.
K Z Oil Co. No. 1 B. Fletcher, E. C. Good Sur. S.D. 750 ft.
Price & Kramer No. 1 Giesecke, Blk. 227, Hughes Sur. S.D. 2,503 ft.
Stevens & Glover No. 1 Fowler, sec. 150 E.T.R.R. Sur., 2 mi. NE of Ballinger S.D. 480 ft.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. Drlg. 2,401 ft.
Tex.Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. Drlg. 1,328 ft.

Scurry County

Bristow & Cantrell No. 1 Tomlinson, sec. 122, Blk. 97, H.&T.C. Sur. S.D. 3,167 ft.
C. W. Guthrie et al No. 1 F. W. Hardee, sec. 99, Blk. 97, H.&T.C. Sur. S.D.

Terry County

Anthony & Rice No. 1 Brownfield, C NW¼ sec. 28, Blk. A-1, E.L.R.R. Sur. T.D. 684 ft.; W.O.C.
Crump & Corrigan No. 1 Lewright, 660 ft. NE, sec. 1, Blk. C-37, P.S.L. Sur. T.D. 5,133 ft.; P.B. to 4,996 ft.; W.O.C.
R. L. Foree No. 1 A. E. Pool, sec. 54, Blk. D-11, D.&S.E. Sur. S.D. 4,627 ft.

Upton County

Maverick Oil Co. No. 1- Holmsley, sec. 16, Blk. B, C.C.S.D.&R.G.N.G. Sur., 14 mi. NE of Rankin. Drlg. 543 ft.

Ward County

F. H. Murphy et al No. 1 Monroe, sec. 210, Blk. 34, H.&T.C. Sur. Drlg. 2,707 ft.
Magnolia Pet. Co. No. 1-55 Sealey, sec. 55, Blk. F, G.M.M.B.&A. Sur. T.D. 3,049 ft.; P.B. to 2,756; drlg. by whipstock.
Mahres No. 1 Wilson. S.D. 5,085 ft.; 3,850 ft. O.I.H.
L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. Top Del. L. 4,635 ft.; top Del. sd. 4,670 ft., S.O. 4,690 ft.; T.D. 4,702 ft.; flowed 15 bbls. in 20 minutes; swabbed 45 bbls. in 8 hrs.

Winkler County

Champlin No. 2 Cowden, 330 ft. from N and E, sec. 2, Blk. 12, P.S.L. Sur. W.O.C. 378 ft.

Yoakum County

Bahan et al No. 1 Shook Est., sec. 420 Blk. D, John H. Gibson Sur. Top lime 4,570 ft.; C.O. 5,321 ft.; shot.
Bahago & Bond No. 1 West, 1,980 ft. from N and W, sec. 606, Blk. D. Drlg. 2,240 ft.
Denver Dev. Co. No. 1 Whittenburg, 660 ft. from N and W, sec. 831, Blk. D, J. H. Gibson Sur. R.U.R.
Magnolia Pet. Co. No. 1 Mrs. M. E. Taylor, sec. 201, Blk. D, John H. Gibson Sur. Elev. 3,607 ft.; drlg. 4,957 ft.
Moore Bros. No. 1 Cleveland, sec. 706, Blk D, J. H. Gibson Sur. Loc.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

Garland Moore et al No. 1 T. S. Williams, 1 mi. NE Grosvenor. Sec. 40, H.T.&B. Sur., Abst. 2037. Spdg. & S.D.
West Texas O. & R. Co. No. 1 J. P. Newton, 3 mi. S Cross Cut, W. L. Swain Sur. No. 145; T.D. 1,342 ft.; S.D.

Callahan County

Hal Hughes No. 1 Poindexter, 330 ft. fr. N&E of sec. 350, Geo. Hancock. Sur. 2 mi. NE of Oplin. S.D. 460 ft.
J. C. Jackson et al No. 1 Thompson, 2 mi. S. Eula, sec. 30, B.B.B.&C. Sur. Drlg. 765 ft.
B. A. Wilkinson, Trustee, No. 1 F. L. Martin, sec. 69. T.&P. Sur., Blk. 14. Drlg. sand 1,933-37 ft., good show oil; tstg.

Coleman County

Dixie O.&G. Co. No. 1 Reaves, 6 mi. NW Bangs, J. M. Rhine Sur. No. 629. S.D. 805 reprs.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. I. Terry, Desdemona pool, N. H. Kuykendall Sur. Skd. 10 ft. N; drlg. 2,725 ft.

Eastland County

Barnett Pet. Corp. No. 1 Downtain, 1½ mi SE of Eastland, sec. 2, E.T.R.R. Sur., Blk. 6, O.S. 1,440-50 ft.; 35 bbls., tstg.; P.O.P.
Barrett & Moon No. 1 Foote, 4 mi. NE Carbon, sec. 9, H.&T.C. Sur., Blk. 2. Spd. and S.D.
Monark O. & G. Co. No. 1 Downtain, sec. 14 H.&T.C. Sur. Blk. 4, 3 mi. N Eastland. Drlg. 900 ft.
L. A. Thompson No. 1 C. V. Fox, 4½ mi. S of Ranger, Lot 28, McLennan Sur., Lge. S.D. 1,120 ft.

Erath County

Jess Hickey et al No. 1 W. M. Martin, 2 mi. SE Desdemona, D. J. Otho Millard Sur. A-533. 1,597 ft. fsg. tools.

Haskell County

E. W. Marland & H. B. Drake No. 1 Corothers, 6 mi. S Haskell, sec. 67, D. E. Zaaz Sur. Rlgn. up.

Jack County

Everts Drlg. Co. No. 1 D. M. Shown, sec. 833, T.E.&L. Sur., SW cor. of county. Drlg. 4,010 ft.
F. S. Freeland No. 1 R. E. Graves, S. Hazel Sur. S.D.
G. M. Gillespie No. 1 O. Loving, sec. 3345, T.E.&L. Sur., 2 mi. SE Jermyn. Set 7-in. 3,125 ft.; S.D. for spdr.
Fred Herschback No. 1 Newman, 3 mi. N Bryson, 330 ft. from S, 1,220 ft from W of Jno. Matlock Sur., Abst. 1812. Loc.
Hill & Hill No. 1 Hickman, T. M. League Sur. T.D. 3,100 ft.; tstg.
Lion O. & R. Co. No. 1 S. Newman, 6 mi. NE Bryson. Drlg. 3,460 ft.
H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. S.D. 1,831 ft.
O. J. Murray No. 1 W. J. Eatherly, J. Helmstutler Sur. S.D. 100 ft.
T. C. Patton No. 1 J. R. Williams, B.S.&F. Sur., 5 mi. SE Rhodes pool. Drlg. 3,400 ft.
R. A. Westbrook No. 1 W. Knox, sec. 83, B.B.B.&C. Sur. S.D. 1,560 ft.

Jones County

Art Cox No. 1 West, 10 mi. E Noodle Creek pool, Lot 72, Godwin Subd., Dewitt Co. Sch. Lds. Drk.
Fain & McGaha Oil Corp. No. 1 J. H. Wheeler, 3 mi. NW Sandy Ridge pool. sec. 55, O.A.L. Sur. Loc.
Humble O. & R. Co. No. 1 Teaff Est., E S and W of NE¼ sec. 33, T.&P. Sur., Blk. 18. Loc. for 5,600-ft. Ordovician test; drlg. 4,300 ft.
T. D. Humphrey No. 1 Radford, 3 mi. S Hawley, sec. 38, T.&P. Sur., Blk. 16. Drlg. 2,616 ft.
Iron Mountain Oil Co. No. 1 Olander, 3 mi. E Avoca, 220 ft. fr. N & E of SW¼ sec .196, B.B.B.&C. Sur. Gr. porous L. 3,238-50 ft.; swabbed 140 bbls. in 12 hrs., 42.1-gravity oil; treated 3,000 gals. acid; flowed 200 B.P.H. first 3 hrs. and considerable in pits through split joint 53/16-in.; killed well to test for split csg.
S. B. Owens et al No. 1 Galbreath, ½ mi. S of Guitar pool, 220 ft. N and 1,820 ft. W, sec. 45. T.&P. Sur., Blk. 15. Drlg. 1,885 ft.
Owens-Snebold Oil Corp. No. 1 J. L. Herndon, 2 mi. SW Anson, S.P.R.R. Sur., Blk. 2. Drlg. 2,520 ft.
Frank Oyster et al, 1 mile S Nugent, 2,100 ft. from N and 200 ft. from W of sec. 11, T.&P. Sur., Blk. 4. Drlg. 1,670 ft.
W. H. Peckham No. 1 Davis et al, 3 mi. SW Lueders. Subd. 8, F. M. Smith Sur. No. 3. Drlg. 1,600 ft.
Riddle et al No. 1 J. D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. S.D. 2,300 ft.
Southern Oil Co. No. 1 B. W. Thane NE

(Continued on Page 128)

NO Squeaks IN MILLER SAND PUMPS

Because the MILLER cleans out the sand in your wells, permitting free flowing of the oil—*the Sand Pump with the powerful suction action that is in worldwide use.*

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type, ¼-inch wall tubes HEAVY Type Sand Pumps.

INTERCHANGEABLE BOTTOMS
To Meet Every Condition

- **BAILER BOTTOM** — With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.
- **SAND BOTTOM** — Used when tools are run and when well is shot to quickly remove loose material.
- **STAR BOTTOM** — Used for cutting the sand loose.
- **CHISEL BOTTOM** (In Pump) — With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Page 1186 COMPOSITE CATALOG

PATENTED NO. 1370340 NO. 1523604 NO. 1787390 NO. 1862628 NO. 1866020 NO. 2059667

MILLER Sand Pump Co.

General Offices and Shop, Box 4516
OKLAHOMA CITY, OKLA., U. S. A.

Branch Shops and Offices:
SAPULPA, OKLA. and KILGORE, TEX.

FOR SALE BY SUPPLY STORES EVERYWHERE

Louisiana-Arkansas Fields

(Continued from Page 98)

east of New Boston on the John Bell Survey, has been plugged at a total depth of 6,010 feet. The Paluxy was topped at 3,349 feet, and the massive anhydrite drilled from 4,639-4,825 feet.

Harrison County

Four completions were made last week on the flank of the Waskom oil and gas field, having an aggregate initial production of 106 bbls., or an average of 26 bbls. per well. Production is from the Tokio sand at 2,390 feet.

Panola County

Glassell & Glassell No. 1 Pierce and Chesbro, P. Scape Survey, at a total depth of 5,881 feet, has been giving considerable trouble due to gas blowouts. Mud weight material is being used to correct this condition. This well is at a deeper level than the two gas and distillate producers formerly completed by these same operators in the Lower Glen Rose.

Shelby County

Redditt & Gray No. 1 Pickering Lumber Co., in the S. English Survey, has been producing about 5,000,000 feet of gas on tests for the last week. It is now the plan to set 5-⅛-inch casing near bottom and perforate higher in the hole, with the hope that some of the gas will be shut off and completion can be made as an oiler.

MISSISSIPPI

Amity County

J. P. Wemple No. 1 Southern Forest Land Co., section 24-4n-2e, has been abandoned as dry at total depth of 5,235 feet.

Hinds County

The Mississippi Mineral Lease Commission has awarded contracts for the drilling of two additional wells upon their acreage in the proven area of the Jackson gas field. They are to start drilling at once.

West Texas Fields

(Continued from Page 102)

feet, plugged back to 4,493 feet, shot, 818 bbls. Humble Oil & Refining Co. No. 23 J. S. Means, 4,526 feet, acidized, 583 bbls.; No. 25 J. S. Means, 4,521 feet, acidized, 847 bbls.

Crane County

Superior Oil Co. No. 6 Hughes, 2,245-97 feet, acidized, 695 bbls. M. F. Turner No. 3 Hughes, 2,390-2,453 feet, acidized, 497 bbls. on pump.

Ector County

Sinclair Prairie Oil Co. No. 3 University, 3,502-3,674 feet, shot, 231 bbls. Devonian Oil Co. No. 5-A Scharbauer, 4,161-4,232 feet, acidized, 419 bbls., shot. Empire Oil & Refining Co. No. 3-D Cummins, 4,165-4,247 feet, acidized, 318 bbls. Bond & Harrison No. 6 Rumsey, 4,189-4,260 feet, acidized, 600 bbls. York & Harper No. 4 Foster, 4,050-4,185 feet, shot, 581 bbls. Landreth Production Co. No. 1-B Cummins, 4,188-4,232 feet, shot and acidized, 265 bbls.; No. 7-C Scharbauer, 4,175-4,235 feet, acidized, 695 bbls. No. 3-I Scharbauer, 4,171-4,215 feet, 1,314 bbls. Rogers and Rogers No. 1 TXL, dry and abandoned 4,335 feet, elevation 3,231 feet. Humble Oil & Refining Co. No. 1-B Scharbauer, 4,180-4,220 feet, acidized, 1,396 bbls. Atlantic Refining Co. No. 4-B Rumsey, 4,170-4,282 feet, shot, 253 bbls.; No. 1-E Cummins, 4,250 feet, acidized, 264 bbls. B. F. Nysenwander and others No. 3 Scharbauer, 4,166-4,219 feet, acidized, 507 bbls. Gulf Oil Corp. No. 27 Goldsmith, 4,140-4,215 feet, acidized, 1,127 feet. Honolulu & Black No. 1-B Cowden, 4,115-4,252 feet, acidized, 287 bbls. Stanolind Oil & Gas Co. No. 53 Cowden, 4,058-4,289 feet, shot, 866 bbls. Landreth Production Co. and others No. 4 Holt, 4,095-4,245 feet, shot, 625 bbls. Mid-Continent Petroleum Corp. No. 3 Blakeney, 4,100-4,233 feet, shot, 308 bbls.

Edwards County

Dan Auld and others No. 1 Rigsby, dry and abandoned 3,952 feet, elevation 2,291 feet.

Fisher County

Martin & Brubaker No. 1 Brown, 3,190-94 feet, acidized, 4 bbls. per hour.

Pecos County

Worth Drilling Co. No. 3 Brandenburg, 2,267-2,360 feet, shot, 827 bbls. Sam Wan Oil Co. No. 4 Masterson, 1,230-1,460 feet, shot, 271 bbls. Hightower Oil Co. No. 1 Holmes, dry and abandoned 3,058 feet, elevation 2,265 feet. W. Y. Penn No. 1 Tipton, dry and abandoned 2,425 feet, elevation 2,479 feet.

Gaines County

Wentz Oil Co. No. 1 Dalmont, dry and abandoned 4,885 feet, elevation 3,302 feet.

Upton County

Brown-Hancock Oil Co. No. 1-C Baker, 2,260-2,339 feet, acidized, 960 bbls. on pump. Sergeant and others No. 1 Edler, 2,288-99 feet, 374 bbls. on pump. Webb Ray Oil Co. No. 2 Cordova Union, 2,050-2,107 feet, plugged back to 2,078 feet, 228 bbls. on pump. George Farley No. 3 Shell-Estes, 2,219-61 feet, acidized, 242 bbls. on pump. Sun Oil Co. No. 9 Burleson-Johns, 2,075-2,159 feet, acidized, 217 bbls. on pump. Cardinal Oil Co. No. 4-A Cordova Union, 2,200-88 feet, acidized, 312 bbls. on pump. Clay Johnson No. 1-A Shirley, 2,130-67 feet, acidized, 379 bbls. on pump. Roy Brown No. 1 Powell, dry and abandoned 2,353 feet.

Ward County

Hall and others No. 2 Emery, dry and abandoned 2,352 feet. Atlantic Refining Co. No. 28 Johnson, 2,430-2,550 feet, shot, 357 bbls. Standard of Texas No. 15 McFarland, 2,550-2,675 feet, shot, 390 bbls.; No. 14-37 McFarland, 2,540-2,640 feet, shot, 520 bbls.; No. 4-29 McFarland, 2,508-2,647 feet, shot, 304 bbls.; No. 3-29 McFarland, 2,540-2,640 feet, shot, 528 bbls. Tide Water Associated No. 34 Johnson, 2,535-2,670 feet, shot, 2,200 bbls. Eppenauer Drilling Co. No. 5 Stanolind-University, 2,575-2,739 feet, shot, 276 bbls. Gulf Oil Corp. No. 80 Hutchins, 2,550-2,750 feet, shot, 823 bbls.; No. 83 O'Brien, 2,615-2,767 feet, shot, 951 bbls. West Texas Oil & Royalty Co. No. 2-C University, 2,395-2,650 feet, 370 bbls. in 22 hours.

Winkler County

Atlantic Refining Co. No. 7 Lovett, 2,760-3,075 feet, shot, 1,368 bbls. Skelly Oil Co. No. 19 Halley, 2,770-2,985 feet, plugged back to 2,898 feet, shot, 230 bbls. through three-eighths inch choke. Empire Oil & Refining Co. No. 4-E Daugherty, 2,995-3,060 feet, acidized, 2,073 feet; No. 4 Scarborough, 2,830-3,000 feet, shot, 320 bbls. Humble Oil & Refining Co. No. 15-C Walton, 3,010-50 feet, 1,030 bbls. through seven-eighths inch choke. Texas Pacific Coal & Oil Co. No. 21 Daugherty, 2,843-2,943 feet, shot, 205 bbls. Magnolia Petroleum Co. No. 87 Walton, 3,080-3,285 feet, shot, 555 bbls.; No. 89 Walton, 3,025-3,250 feet, shot, 330 bbls.; No. 90 Walton, 2,700-2,930 feet, shot, 979 bbls. Bert Fields No. 14 Pure-Clapp, 2,720-3,110 feet, shot, 1,926 bbls.; No. 16 Pure-Clapp, 2,728-3,106 feet, shot, 2,097 bbls. Richardson Oil Corp. No. 2 Humble-Walton, 3,320-84 feet, shot, 143 bbls. Falcon Oil Co. No. 13 McCutcheon, 3,280-3,400 feet, shot, 312 bbls.

CENTRAL TEXAS COMPLETIONS

Jack County

Beard and Collier No. 4 Ezell E, total depth 3,030 feet, sand 2,945-46 feet, 20 bbls. Deep Oil Development Co. No. 4 Bryson, 3,008-17 feet, shot 40 quarts, 133 bbls. Mullendore, Berry & Berry No. 1 North, 2,994-3,014 feet and 3,022-30 feet, 402 bbls. Two Well Oil Corp. No. 1 Jones, 3,086-92 feet, 3,174-92 feet and 3,217-32 feet, initial production 599 bbls.

Jones County

Lewis Production Co. No. 4 Sayles, 1,972-90 feet, initial production 120 bbls. N. H. Martin & Son No. 6 Dorsey C, 2,183-2,208 feet, 20 bbls. oil. Ungren & Frazier No. 12 Dorsey C, 2,185-98 feet, initial production 570 bbls.

Shackelford County

Albany Oil Co. and Pardue No. 12 Davis, 1,612-28 feet, initial production 75 bbls. V. A. Fisher No. 1 Alice Walker, total depth 1,132 feet, dry and abandoned. Roeser & Pendleton No. 1 Newell, total depth 1,947 feet, dry and abandoned.

NORTH TEXAS COMPLETIONS

Archer County

L. T. Burns No. 1 T. L. Longley B, 1,130 feet, dry. Deep Oil Development Co. No. 20 L. F. Wilson, 2,222-45 feet, 600 bbls. Iron Mountain Oil Co. No. 1 J. A. Young, 1,470 feet, dry. Nancy McChesney No. 4 G. M. Benson, 869 feet, dry. A. P. Nicholson, Trustee, No. 1 Prideaux, 881 feet, dry. G. J. Scholl No. 4 Claude Cowan, 1,004-15 feet, 10 bbls. Underwood Drilling Co. No. 6 T. B. Wilson, 1,645 feet, dry. Texas Plains Oil Co. No. 4 W. H. Terrell A, 705 feet, dry.

Clay County

Green Mountain Oil Co. No. 1 E. B. Staggs, 3,297 feet, junked. O. R. Tautenhahn No. 1 May Fultz, 1,804 feet, dry.

Cooke County

Kingery Brothers & Temples No. 2 H. Henscheid, 800 feet, key well. F. W. Merrick, Inc., No. 3 C. A. Stelzer C, 854 feet, key well. Vance E. Powell No. 1 D. B. Allred, 4,357 feet, dry.

Denton County

McDaniels & Dickson No. 1 E. W. Forrester, 1,866 feet, dry. Oil Finance No. 1-A J. S. Gambill, 2,380 feet, dry.

Grayson County

Denver Producing & Refining Co. No. 1 G. E. McMenamy, 4,085 feet, dry.

Knox County

Denver Producing & Refining Co. No. 1 W. T. Waggoner, 3,752 feet, dry.

Montague County

Arco Oil Co. No. 10 M. H. Salmon E, 1,129-46 feet, 35 bbls. Continental Oil Co. No. 35 N. J. Howard, 993-1,005 feet, 18 bbls. Lesh & McCall No. 18 R. W. Cunningham A, 920-36 feet, 10 bbls.; No. 1 Dodson, 3,511 feet, dry. Mullens & Weil No. 1 T. H. Hodges, 1,003 feet, dry. Texas Co. No. 6 J. E. Lemons, 896-929 feet, 40 bbls.

Wichita County

Magnolia Petroleum Co. No. 2 Sarah Pratt A, 1,781 feet, dry. D. G. Parker No. 1 fee, 1,343 feet, dry. Ryan Petroleum Co. No. 112 G. L. Nance, 1,310 feet, dry.

Wilbarger County

F. A. Lain No. 1 J. Coffee, 6,612 feet, junked. Phillips Petroleum Co. No. 196 Waggoner, 3,083-97 feet, 980 bbls. Waggoner Refining Co. No. 9 W. T. Waggoner CC, 1,098-1,113 feet, 10 bbls. C. C. Wilson and others No. 1 W. T. Waggoner, 1,099-1,113 feet, 35 bbls.

Young County

S. S. Alexander and others No. 4 M. L. Clark, 1,112 feet, dry. L. T. Burns No. 11 Rushing, 895-902 feet, 10 bbls. Cable Oil Co. No. 4 H. O. Prideaux, 561-71 feet, 10 bbls. B. B. Mercer, Trustee, No. 4 Belknap Coal Co., 650 feet, dry. A. T. Strong No. 3 M. K. Graham, 2,630 feet, dry. White & Duncan No. 1 Clifton Heirs, 748 feet, dry.

Eastern Fields

(Continued from Page 88)

from 520,000 feet a day to 5,329,000 feet a day. The total depth was 4,936 feet.

In Elk district, the test on the R. L. Wolfe farm by the Columbian Carbon Co. increased from 431,000 feet a day to 1,224,000 feet a day with a shut-in pressure of 1,800 pounds and a final depth of 5,212 feet. This company's test on the John Summers, Jr., farm also increased from 393,000 feet a day to 2,000,000 feet a day.

In Union district, Godfrey L. Cabot, Inc., has resumed drilling the test on the Sarah Ann Null farm and is down 3,248 feet. On the C. W. Richardson farm, this operator is drilling at 1,345 feet. The Grandview Gas Co. has reached 2,000 feet in a test on the Grandview Memorial Park.

Outside Deep Tests

In Wirt County, the test of the Carnegie Natural Gas Co. on the W. C. Patterson farm on the Burning Springs anticline in Burning Springs district is drilling at 4,757 feet with a second oil show in the Corniferous lime at 4,752-53 feet. The oil was very dark. This company's test on the W. O. Caplinger farm in Tucker district is rigged up and waiting on an engine part to start.

In Jackson County, the tests of the United Carbon Co. on the Elizabeth W. Perkins farm in Washington district are drilling at 2,209 and 2,090 feet, respectively. In Putnam County, the test of the West Virginia Gas Corp. on the C. E. Albertson, Jr., lease in Pocatalico district is shut down at 4,532 feet to run casing.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ending July 10 Sales	Week ending July 10 High	Week ending July 10 Low	Week ending July 10 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	80	9,300	92	88	91⅝	Amerada Corp.	788,675	N.P.	50cQ	7-31-37	$2.00	125½	75	80	48½
37	27¼	6,300	31⅜	30⅛	30⅛	Atlantic Refining	2,664,000	$25	25cQ	6-15-37	1.25	35⅛	26⅝	28	20½
43⅜	27⅝	4,600	32½	30⅝	31⅞	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11¾
35¼	23½	11,500	27¾	26	26¾	Barnsdall Oil Co.	2,247,974	$5	25cQ	8-2-37	.80	28¼	14⅛	14¾	5⅞
20⅞	10	16,000	13	11½	12⅞	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-16-36	.40	23⅜	14	15¾	3⅝
17⅞	14½	16,700	16⅛	15⅞	16⅛	Consolidated Oil Corp.	13,919,417	N.P.	20cQ	8-14-37	.80	17¼	11½	12¼	6½
48¼	39¾	9,300	48¼	47⅜	47⅞	Continental Oil of Delaware	4,682,615	$5	50cQ†	6-30-37	1.50	44⅞	28⅛	35	15⅛
17⅝	12½	27,700	16⅜	15⅜	15⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	25⅛	5,800	29⅞	28¾	29⅜	Mid-Continent Petroleum	1,855,912	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9½
34	23⅞	2,100	28¾	27¼	28⅝	Mission Corporation	1,399,345	N.P.	....	.....	.45	29⅞	16¾	17¾	10⅝
38⅞	31¾	18,600	38⅞	36⅜	38	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22⅞	17⅛	15,900	20⅞	20	20	Ohio Oil Co.	6,563,377	N.P.	50cSA	6-15-37	.60	18	12⅛	14¼	9¼
29¾	20¾	800	24⅛	23½	23¾	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11¾	14	6⅜
4½	2	2,000	2¾	2⅛	2½	Panhandle P. & R.	198,770	N.P.	....	.....	....	4¼	1⅜	1⅞	⅛
59⅝	49½	16,700	59⅝	57⅝	58½	Phillips Petroleum	4,449,052	N.P.	75cQ†	6-1-37	2.50	52⅝	38½	40	13⅜
29⅞	24¼	5,600	27¼	26½	26⅝	Plymouth Oil Co.	1,050,000	$5	35cQ†	3-31-37	.90	27¾	11⅞	13	6½
24⅜	16⅝	87,400	20⅞	19⅞	19⅞	Pure Oil Co.	3,281,120	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	36⅝	1,900	43¾	42½	43½	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	6-15-37	1.00	44	30½	36⅞	20¾
34¾	25⅝	3,900	28¾	28	28	Shell Union Oil	13,070,625	N.P.	50c	7-15-37	.25	28¼	14¾	16½	5½
105⅝	102	1,300	104⅝	104	104⅝	Shell Union Oil 5½% pfd.	343,500	$100	26⅛c	12-15-36	28.87½	127½	102	111	63½
4¼	3½	600	3⅝	3⅝	3⅝	Simms Petroleum	461,698	$10	50c liq.	1-9-37	2.25 liq.	6¾	3½	18¾	4¾
60⅝	42	4,400	59½	57⅞	58	Skelly Oil	1,006,348	$15	50c	7-1-37	....	47⅜	19½	20½	6½
21	16¼	120,000	21	20⅛	20⅞	Socony-Vacuum	31,151,071	$15	25cSA	3-15-37	.70	17½	12½	15¾	10⅝
50	39⅝	12,400	43⅝	42½	43½	Standard Oil of California	13,014,754	N.P.	45cQ†	6-15-37	1.20	47⅝	35	41⅛	27¾
50	40½	11,100	44⅜	43	44	Standard Oil (Indiana)	15,196,241	$25	40cQ†	6-15-37	2.40	48½	32¾	33⅜	23
34⅛	30⅝	300	34½	34	34	Standard Oil of Kansas	134,841	$10	$1	12-26-36	1.00	31	25	32	20
76	63⅛	21,100	68¾	67	68¾	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	6-15-37	2.00	70⅜	51⅛	52⅜	35¾
77½	65	500	69	68	69	Sun Oil	2,156,825	N.P.	25cQ	6-15-37	$1 & 6% Sk.	91	70	77	60½
65⅛	50⅜	38,700	62⅛	60⅜	61¼	Texas Corp.	10,896,858	$25	50cQ	7-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	6	6,700	7½	7	7¼	Texas Gulf Producing Co.	888,126	N.P.	5c	12-15-36	.05	8⅞	4⅜	4¾	2⅛
16⅝	11¾	17,700	15¼	14⅜	14⅞	Texas Pacific Coal & Oil	888,237	$10	10c	6-1-37	.25	15¼	7½	9¼	3¼
21⅝	15⅜	16,900	19	18⅛	18⅝	Tide Water Associated	6,288,512	N.P.	20cQ	6-1-37	.70	21¾	14¾	15⅞	7⅝
28¼	22⅞	10,400	25¼	24⅛	24¾	Union Oil of California	4,386,070	$25	30cQ	5-10-37	1.00	28½	20¾	24	14⅜
31½	24¾	700	28⅜	26¼	27½	Union Tank Car Co.	1,200,000	N.P.	40cQ	6-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	4¼	2,200	5⅜	5⅛	5¼	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¼	2¾	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ending July 10 Sales	Week ending July 10 High	Week ending July 10 Low	Week ending July 10 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	16	800	17¾	16¼	17¾	Bridgeport Machine Co.	260,000	N.P.	$1	12-21-36	$1.00	21	13¼	14⅛	3¾
51½	45¾	50	49	49	49	Buckeye Pipe Line Co.	200,000	$50	$1Q	6-15-37	3.25	50	39¾	42[illegible]	[illegible]
2¾	1⅝	1,900	1⅞	1¾	1¾	Carib Syndicate	799,020	25c	....	.....	....	4⅞	1⅞	[illegible]	1⅝
123	110¼	50	116	116	116	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-28-37	7.00	124¾	105	157	115
5⅜	2⅝	38,300	3½	2¾	3⅜	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅜	3	3¼	⅝
5⅜	4⅛	7,500	5½	4⅞	5	Cosden Petroleum	399,687	$1	....	.....	....	4½	1½	1½	⅛
38	28½	12,500	38⅜	37	38¼	Creole Petroleum	6,974,356	$5	50cSA†	6-10-37	.50	39	19⅞	23¾	10
18⅝	11½	3,400	13⅝	12¼	13⅜	Darby Petroleum	351,390	$5	25cSA	7-15-37	.50	18⅛	9	8⅝	4
8¼	5¼	1,800	7	6½	6¾	Derby Oil & Refining	263,162	N.P.	....	.....	....	6¾	1⅞	2	⅝
47½	36½	50	35½	35½	35½	Eureka Pipe Line	50,000	$50	$1Q	8-2-37	4.00	47½	38½	38	33¼
63½	50	9,400	57	55¼	55¾	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	72	3,600	81	79	80	Humble Oil & Refining	8,923,935	N.P.	37½cQ	7-1-37	1.50	80	57	64	44
24¼	20	3,600	20⅞	20¼	20⅞	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-37	1.25	24½	19¾	22½	15⅝
15	7¾	100	10	10	10	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	33½	3,700	34⅞	34	34	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-37	2.50	39⅝	32⅝	39¾	28
15¼	11⅜	13,700	13⅜	12¼	13¼	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-15-37	.50	15⅜	9⅞	11⅜	4⅝
33⅛	16⅛	27,200	34	29	30¼	Lion Oil Refining	270,000	N.P.	50cQ†	7-20-37	.75	17¾	7⅜	8⅛	3½
14¼	9⅞	3,700	10¾	10⅛	10¾	Lone Star Gas	5,382,723	N.P.	20c	4-20-37	.60	14¼	9⅞	10⅞	4½
14⅝	9½	1,500	10¼	9⅞	10	Midwest Oil Co.	998,444	$10	50c	6-15-37	....	..	..	..	..
7	4⅛	3,100	6½	6⅛	6½	Mountain Producers	1,682,182	$10	30cSA	6-15-37	.60	8⅜	5	5¾	4⅛
19½	14⅛	2,400	15½	14⅛	14⅛	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-37	1.00	23	17⅜	20	11⅝
12½	10	600	10¾	10½	10½	National Transit	509,000	$12.50	45cSA	6-15-37	.75	15¾	9¼	10⅝	6⅝
6⅛	4¾	200	5⅞	5⅞	5⅞	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	2¼	600	2¾	2½	2¾	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4½	No sales	..	..	..	New York Transit	100,000	$5	15cSA	10-15-36	.35	6¼	4¼	4⅞	3
12¾	7½	1,100	9	7½	8	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5½	24,200	8⅝	8⅛	8¼	Pantepec Oil	1,608,700	N.P.	....	..	..	10⅛	3¼	4⅜	1¼
13¾	5	1,300	6⅞	6⅝	6⅝	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6¼	4	1,400	5¾	5¼	5¾	Ryan Consolidated	296,931	N.P.	....	....	....	4¾	1⅞	2½	⅝
48	42	300	44¼	42¾	44¼	South Penn Oil	1,000,000	$25	75cQ†	6-30-37	2.60	44	32½	34½	21⅝
7¼	5	No sales	..	..	..	Southern Pipe Line	100,000	$10	20cSA	3-1-37	.25	7⅞	3¼	5	3⅞
42	27	No sales	..	..	..	South West Penna. Pipe Lines	35,000	$50	50cQ	4-1-37	13.00	60	44	56	44¼
20¾	19	1,300	20¼	19½	20¼	Standard Oil of Kentucky	2,604,790	$10	40cQ†	6-15-37	1.35	23⅜	17⅛	24	18
13¾	9⅞	No sales	..	..	..	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7⅞
45	33	1,900	38	35¾	36½	Standard Oil of Ohio	753,740	$25	25cQ	3-15-37	2.00	40	21¾	23⅝	11½
4⅞	3¾	21,400	4⅞	4⅛	4⅞	Sunray Oil	1,910,119	$1	10c	8-20-37	.10	5	2⅝	2⅞	⅞
7⅝	5	1,300	6	5¼	5¾	Texon Oil & Land	336,028	$2	15cQ	6-30-37	.60	9¾	5⅝	6⅞	5

*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

PERSONAL

E. WALTER KRAMPERT, who recently resigned his position as Rocky Mountain geologist with Superior Oil Company, has opened up offices at 303 Consolidated Royalty Oil Company Building, Casper, Wyo., to engage in consulting geological practice.

CHRISTIAN VRANG, geologist, and A. W. HARPER, business manager of the Yellowstone Oil Company, are making their headquarters in Shoshoni, Wyo., while Mr. Vrang carries on a geological study of the Shoshoni structure on which the Yellowstone holds a large block of acreage.

H. M. KINLEY, Houston, Tex., and FLOYD T. KINLEY, Tulsa, internationally known for their study of explosives and their work in extinguishing oil-field fires, have gone to Fort Sali, Calif., home of their father, K. F. KINLEY, to join other members of the family in a reunion. The two brothers plan to be gone till early August.

S. A. HARTWELL, JR., assistant secretary of the Pennsylvania Grade Crude Oil Association, is ill at his home in Oil City, Pa., with a throat infection.

SYLVAIN PIRSON, head of the petroleum and natural gas department of the Pennsylvania State College School of Mineral Industries, is doing geophysical work in the Mid-Continent this summer for the Seismograph Service Corporation, Tulsa.

W. B. BROWN, formerly general salesman for the Standard Oil Company (New Jersey) in Baltimore, Md., has been promoted to personnel director of the Delaware-Maryland-District of Columbia division. Mr. Brown, who was educated at the University of Delaware, joined the company six years ago as a service station salesman. F. W. BUTLER has been appointed division manager of Tennessee. He has been in the company's service since 1921.

WARD POWELL, independent producer of Fort Worth, Tex., is spending a month's vacation on the beach at Galveston, Tex.

E. H. BUCKNER, independent oil operator, of Houston, Tex., and MRS. BUCKNER have returned from a motor trip to Colorado and Wyoming.

LAWRENCE VANDER LECK, chairman of the Central Committee of California Oil Producers and vice president of the Fullerton Oil Company, has returned to his Los Angeles office from his annual vacation.

DR. F. H. GARNER, chief chemist of Esso European Laboratories and a vice president of the Institution of Petroleum Technologists, has been appointed honorary associate editor of the Institution's journal.

GOV. RICHARD W. LECHE, of Louisiana, held the first meeting of his new Minerals Commission in Baton Rouge. It was attended by CHARLES G. LASKEY, Shreveport independent; MAYOR ROBERT MAESTRI, New Orleans, former state conservation commissioner, and C. C. SHEPPARD, lumber and oil man of Clarks.

FRANK RIEBER, of the Rieber Geophysical Laboratories in Westwood, Calif., is visiting Mid-Continent areas.

H. E. BARTON, geologist, has been transferred from the Crystal City, Tex., office of the Shell Petroleum Corporation to its geological department in Midland, Tex.

DR. J. A. L. HENDERSON, consulting mining and petroleum engineer, London, has left for the United States and Canada on professional business to cover a period of about six months.

GEORGE G. GOLDEN, president of Cargo Oil Exports, Ltd., New York, is back from a European trip. He visited the company's offices in London and the World Petroleum Congress in Paris.

T. E. WALL, formerly in seismographic work, has organized the Wasweco Petroleum Company with offices in the Shell Building, Houston, Tex., and will engage in production in Mid-Continent and Gulf Coast fields.

RAYMOND T. NELSON, formerly with the Gulf Oil Corporation, Houston, Tex., is now geological scout for the Superior Oil Company of California, covering the Southwest Texas district with headquarters in Corpus Christi.

KRAUS EARHART, Tulsa, safety engineer in the Mid-Continent for the Texas Company, has been transferred to Houston, Tex., and made head of the entire accident prevention work of the company. Mr. Earhart has taken an active part in accident prevention work in the Mid-Continent.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Mid-Continent crude is advanced to 70 cents per barrel, and some pessimists think it will be the top price of the year.

Production of the United States in the first half of 1912 was 50,719,209 barrels, or 10,704,921 barrels less than in the same period in 1911. The Mid-Continent fell off 8,900,790 barrels.

W. H. Isom, president of the Cudahy Refining Company, is president of the Western Petroleum Refiners Association.

Bradford, Pa., oil men, and citizens generally, subscribe the capital for a deep test in the Bradford field. No limit is placed on the depth of the test.

Thomas W. Phillips dies in New Castle, Pa., and Capt. Richard W. Lee dies in Titusville, Pa. Both were among the most prominent oil men in the Eastern fields.

20 YEARS AGO

Minnick Oil & Gas Company brings in the largest producer ever found in the Petrolia, Texas, field. It started at 1,000 barrels a day.

Laborers on the Yarhola Pipe Line Company's line being built from Cushing to St. Louis, strike. They get $3 a day and board, but they want more money.

Oklahoma produced 48,758,804 barrels of oil in the first half of 1917, and Kansas 13,411,769 barrels.

10 YEARS AGO

With Seminole producing 495,000 barrels a day from 590 wells some Seminole producers will petition the Oklahoma Corporation Commission to issue orders restricting drilling. They will ask that Ray Collins be appointed to represent the commission as state oil umpire. Some operators opposed the action and others would not vote on it at a meeting held in Tulsa where action was decided on.

A $50,000,000 natural gas line program is in full swing with the Texas Panhandle as the base of operations.

H. L. BLACKSTOCK, drilling contractor and independent operator of Oklahoma City, Okla., has moved to San Antonio, Tex.

JOSEPH E. MOORHEAD, executive secretary of the Pennsylvania Grade Crude Oil Association, has been elected president of the Oil City, Pa., Rotary Club.

LOUIS C. SASS has been transferred from the Venezuela Gulf Oil Company in Maracaibo, to the Mena Grande Oil Company, Apartado 35, Ciudad Bolivar, Venezuela.

H. R. CULLEN, president of the Quintana Petroleum Company, Houston, Tex., accompanied by his family, left for New York to sail for Europe, planning to spend several months overseas.

OLIN WELLBORN III, vice president and director of the Petroleum Securities Company, Los Angeles, has been elected a director of the Tide Water Associated Oil Company, succeeding the late ROBERT M. SANDS.

T. G. DELBRIDGE was reelected president of the Petroleum Distillation Corporation at the annual stockholders meeting in New York. R. H. DICKSON and W. M. STRATFORD were elected vice presidents; M. H. EAMES secretary and R. P. SESOR treasurer.

D. D. DURR, southern California advertising manager of the Associated Division of Tide Water Associated Oil Company, has been selected general chairman of the Pacific Advertising Clubs Association annual convention which will be held in Los Angeles next June.

PARAGRAPHS

DANIEL T. PIERCE, assistant to the president of Consolidated Oil Corporation, was in Los Angeles, Calif., recently on official business.

W. I. INGHAM, who has been in Oklahoma and western Kansas the past few months as field geologist for the Mid-Continent Petroleum Corporation, has been transferred to Tulsa as geologist.

FREEMAN W. BURFORD, president of the East Texas Refining Company and holder of large acreage in the Rodessa field extension in Arkansas, has been attending the various hearings of the Arkansas Board of Conservation, advocating wide spacing and conservative production practices.

J. C. CHANCE has resigned as field superintendent in the Big Hill district, Jefferson County, Texas, for the Stanolind Oil & Gas Company to take charge of drilling operations for the Merit Oil Company, Houston, Texas. Mr. Chance, who has acquired a financial interest in the Merit organization, is well known along the Gulf Coast, having supervised drilling operations for the old Yount-Lee Oil Company. His connection with the Stanolind Oil & Gas Company began when that company took over the holdings of Yount-Lee.

F. W. HALL, director of research for the Texas Company, has returned from Paris, France, where he took part in the World Petroleum Congress program.

C. J. HICKS, who retired in 1933 as executive assistant to the president of the Standard Oil Company (New Jersey), has been awarded the degree doctor of laws by the University of Michigan. When he left active service he was invited by JOHN D. ROCKEFELLER, JR., to head the trustees of Industrial Relations Counselors, Inc. Recently he was made chairman of the executive committee, which includes also W. C. TEAGLE and JOHN D. ROCKEFELLER III. The degree was conferred on Doctor Hicks as a "forerunner in the field of industrial relations, graduate of the literary and law departments of the University of Wisconsin; active and efficient aide to great corporations in complicated and stubborn problems."

SIDNEY H. KEOUGHAN, well-known independent oil operator, has returned to his home in Casper, Wyo., from Ness City, Kans., near where he and his associates brought in a 5,000-bbl. well on the Beller anticline, Ness County.

C. PAUL CLARK, president of the Clark Brothers Company, Olean, N. Y., has been elected to the board of directors of the S. R. Dresser Manufacturing Company, Bradford, Pa. The Dresser company recently acquired a controlling interest in the Clark Brothers organization.

E. C. CHENEY, pioneer gas and oil man of the Texas Panhandle, has returned to his home in Henderson from a vacation trip in New Mexico. Mr. Cheney, now with the Illinois Pipe Line Company, was production superintendent for the Producers & Refiners Corporation in 1923, when he drilled the first helium gas well on the Bush dome in Potter County, Texas.

ELMER J. BOESEKE, JR., former Pacific Coast polo star who now operates the Enniscrane Oil Company, which has production in West Texas, is inspecting his properties in the Permian Basin.

D. L. PERKINS, consulting geologist and operator of Shreveport, La., credited with the discovery of the Rodessa oil field, is in a critical condition in Barnes hospital, St. Louis, Mo., following an operation.

IRA E. DUGAN, former deputy proration umpire in the Fitts pool, Oklahoma, has opened a consulting office in Ada, Okla., and will specialize in geological, valuation and proration work as well as petroleum engineering.

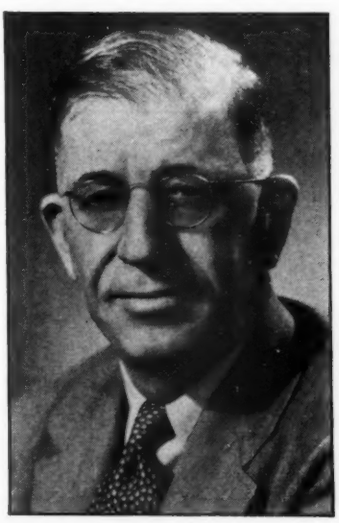
H. DOUGLAS BROWN, JR., of the Brundred Oil Corporation, Oil City, Pa., is expected to recover fully from severe head injuries suffered when his plane crashed while he was en route to Buffalo to attend the recent Pennsylvania Grade Crude Oil Association meeting.

JOHN R. MOYNIHAN, son of CORNELIUS MOYNIHAN, secretary-treasurer of the Iroquois Gas Corporation, Buffalo, N. Y., has been appointed assistant professor of experimental engineering at Cornell University. He received his degree in mechanical engineering at Cornell.

DR. FLORUS R. BAXTER, Olean, N. Y., has been appointed honorary chairman of the ninety-fourth meeting of the American Chemical Society, in Rochester, N. Y., September 6 to 10. For 51 years he was in the service of the Vacuum Oil Company, most of the time head of the company's laboratory.

Heads Asphalt Division

J. F. McSwain, manager of the asphalt department of Shell Oil Company, and recently elected chairman of the Asphalt Institute's Pacific Coast Division, was born in Merced, Calif., and has been identified with construction and industrial engineering ever since he finished school. He was active in rebuilding the streets and street railways of San Francisco after the fire and earthquake of April 18, 1906. He joined the Northwestern Pacific Railroad in 1907, and in 1909 and 1910 was with a reclamation project on Tulare Lake, California. Mr. McSwain entered private construction practice in 1911 in Merced and remained there until 1923. During that time he served as city engineer as well as engineer for various road projects.



J. F. McSWAIN

His first connection with the oil industry was in 1923, when he joined the Gilmore Oil Company as asphalt representative in northern California. In 1930 and 1931 Mr. McSwain was with American Bitumuls Company. Shell Oil Company got him to head its asphalt department in 1931. As division chairman of the Asphalt Institute he will head a program designed to develop the use of asphalt for insulation, corrosion prevention, waterproofing and other industrial purposes and to effect closer cooperation with city, state and federal authorities considering highway construction.

LOUIS MATTES, president of the Estrada Petroleum Corporation, has returned to his Los Angeles office from a vacation trip.

W. P. GEE, United States technical director for the Texaco Development Company, has returned to his New York office after attending the World Petroleum Congress.

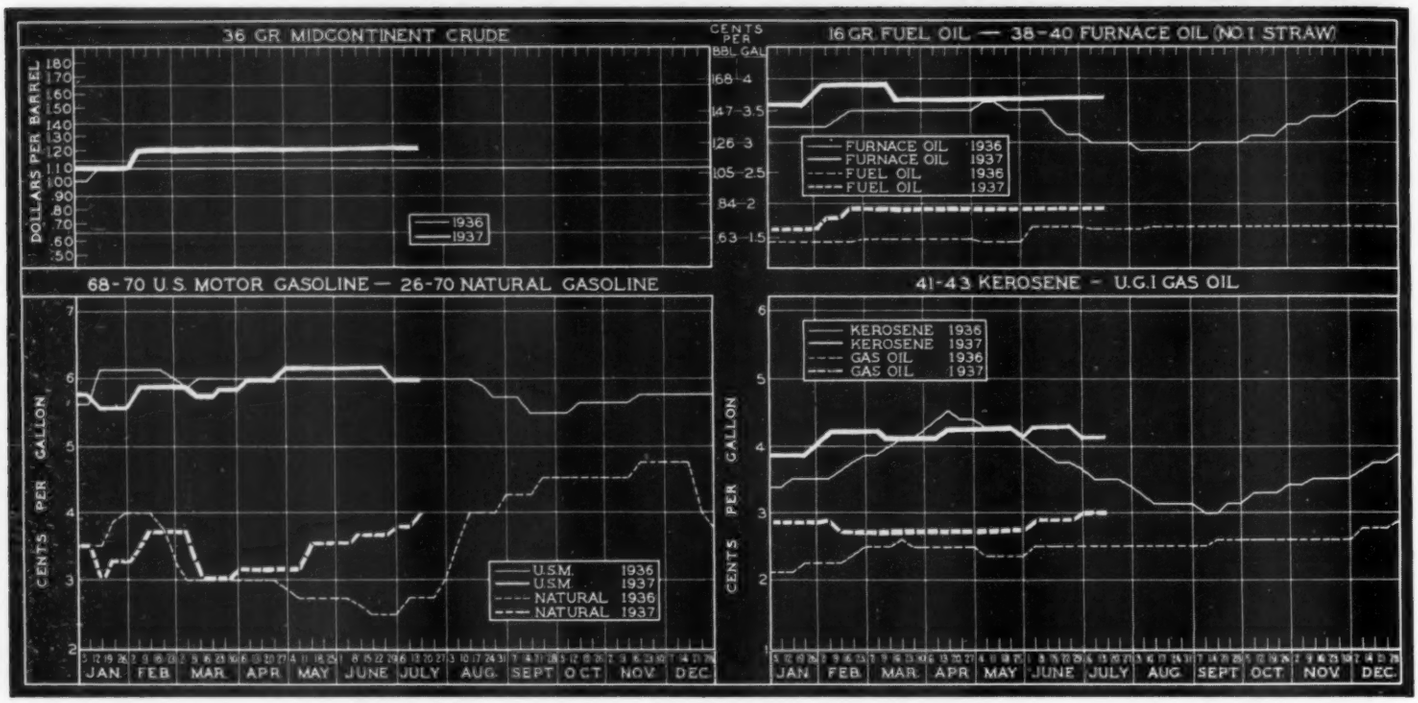
ROLLIN ECKES, recently placed in charge of the Richfield Oil Corporation's new geological office, will be assisted by DREXEL DANA, PATRICK KELLY, J. LeCONTE and WILLIAM BIRTH.

J. ELMER THOMAS, Houston, Tex., geologist, one of the American delegates to the World Petroleum Congress in Paris, will attend the geological conference in Moscow, U.S.S.R., before returning home.

E. O. CAMPBELL, geologist for the Sun Oil Company, has been transferred from Dallas, Tex., to Jackson, Miss., following the company's increasing wildcat activity in the latter state. He joins W. M. CHADDICK, another Sun geologist.

F. C. EMBSHOFF, assistant treasurer and office manager of the Shell Petroleum Corporation's Houston, Tex., office, has been assigned to the company's head office in St. Louis, Mo., during the absence of W. A. BAKER, comptroller.

WARD DELANEY, of Shreveport, La., independent operator in the Dixie field, has been appointed to the oil committee of the East Texas Chamber of Commerce, which will conduct an active campaign to arouse public interest against growing taxation within the industry.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Naturals Rise as Motor Fuel Demand Remains Heavy in Group 3 Area

By D. H. STORMONT

Natural gasoline, the outstanding performer of the Group 3 tankcar market for the past several weeks, continued its upward trend this week as once again prices were moved up a notch. In Oklahoma the 26-70 grade was being quoted at 4 cents, while in North Texas this grade was commanding 4⅛ cents. The increased prices were attributed to increased domestic demand expected to some extent after the July 4 holiday, and to a normally increased demand accompanying the beginning of fall buying for winter specification gasoline. Also the increased demand for immediate shipment has caused buyers to bid higher prices in an attempt to attract natural gasoline from storage.

Naturals Moving to Gulf

Buying of naturals for Gulf Coast delivery remained brisk as refiners in that area continued to shop for gasoline for blending purposes and export demand holds firm. Naturals produced in Texas, for the past two months, have been moving to the Gulf for export and coastwise shipment thus keeping this natural gasoline out of northern markets. Field stocks in Texas, due to this continued good demand, have been substantially lowered so that some naturals from Oklahoma plants are now being moved to Gulf ports. Since neither refiners nor manufacturers have been able to store adequate stocks for fall and winter requirements, an exceptionally brisk market with higher prices is forecast by many in the trade when refiners start taking gasoline to blend into their winter motor fuels.

Motor fuel shipments remained heavy as high temperatures throughout most of the northern United States kept motorists on the highways. Continued heavy demand is acting to improve the tone of the market although quotations remained unchanged. The one-half cent raise in both tankcar and tank-wagon gasoline prices in Standard of New Jersey's Atlantic coastal markets and in Standard of Louisiana's territory was regarded by some market observers as the break that might restore Group 3 prices to June levels.

The huge consumption of gasoline over the Independence Day triple holiday reduced bulk storage throughout the country to low levels, and the need for partial replenishment of these stocks has caused movement to be exceptionally good. Some refinery sales managers reported they were behind in shipments and some were short of material and were buying from other refiners.

Third-grade gasoline was in good demand as the wheat harvest moved north into the Middle West states. There was also reported a better gasoline export demand as foreign buyers showed a keener interest in the gasoline market. Two cargoes of 64-66 gasoline were reported to have been shipped last week from a Gulf port to Europe.

Kerosene Feeling Wheat Harvest

Kerosene and tractor fuels were also feeling the wheat harvest demand. Although there was some spottiness, the market for these products is somewhat firmer than that of two weeks ago and stocks were reported to be in good shape. Domestic fuel oils were feeling the off-season demand but inquiries for fall and winter delivery were more numerous. Industrial fuels were somewhat firmer this week and in more active demand as railroads and large consumers increased their buying following a diminution in labor troubles.

Bright stocks and neutrals remained firm and in satisfactory movement, although the weakness of the Pennsylvania market was reported to be exerting some softening influence. Prices of the 631 grade steam-refined stocks were lower. Wax continued in good movement at unchanged prices. Demand for this product has remained firm throughout a period in which it usually suffers a seasonal slump. Prices were unchanged at 3 cents.

Refined Oil Market Barometer

Heavy gasoline demand and advances in tankcar and tank-wagon prices in Eastern territory is acting to firm gasoline prices of interior markets. An improved export demand is also causing hope for the restoration of June prices. Natural gasoline holding its strength at higher prices. Bright stocks and neutrals weak in eastern regions with prices lower.

MID-CONTINENT. Gasoline demand strong, prices firming. Naturals up.

EAST COAST. Gasoline restless. Heavy fuels strong. Light oils firm.

GULF COAST. Kerosene and gasoline firm. Fuels oils tight.

CALIFORNIA. Gasoline easier, demand excellent. Fuel and diesel oils firm.

PENNSYLVANIA. Gasoline strong. Wax good. Lubes continue weak.

CHICAGO. Gasoline consumption strong with tone firm. Kerosene spotty.

Gasoline Prices Raised on East Coast

But Restless Tone Puzzles Trade

By H. STANLEY NORMAN

NEW YORK, July 13.—Tankcar and tank-wagon prices on all grades of gasoline were advanced a half-cent a gallon today by the Standard Oil Co. of New Jersey, Standard Oil Co. of Pennsylvania, Standard Oil Co. of Louisiana and Colonial Beacon Oil Co. in their respective marketing territories with the exception of metropolitan New York. The record demand for motor fuel since July 1 has tended further to tighten Gulf Coast cargo markets.

Notwithstanding the fact that gasoline consumption in the northeastern territory reached an all-time peak over the triple holiday ending July 5, there is a restless tone in the market difficult to identify. The unrest probably is due to under canopy competition and to a slump in spot market transactions between Gulf Coast refiners and North Atlantic jobbers.

There has been no evidence of the unrest in New York and vicinity tankcar markets; in fact, the trend has been upward for the past two weeks. However, several tankers are reported available in Gulf Coast ports for charter, and rates of perhaps 5 cents per barrel below the latter half of June market probably can be arranged at present.

Easing of the tanker market probably can be traced to fulfillment of outside purchases by several major companies which were forced to augment their own gasoline supplies during the early part of the summer.

Furthermore, traders reported last week that coastwise movement of gasoline had slumped considerably after July 4. The slump was not indicative of a turn in consumption trends, but merely a return to normal after inflated movement in anticipation of holiday motoring demands.

Continuous high gasoline consumption is anticipated in the trade during remainder of the summer vacation season. This generality was particularly true last week as city and suburban dwellers flocked to seashore beaches and mountain retreats seeking relief from this summer's highest temperatures, which persisted unbroken for about a week.

In New York and vicinity it was reported that unbranded 65-octane gasoline in tankcars is not available for less than 7½ cents per gallon for spot movement. Current quotations represent a slight improvement over the previous week, but are not an actual elevation of the market since most large sellers were level with or above that figure before turn of the half year. One of the frequent service station price wars was under way last week in Brooklyn, where 50 to 75 per cent of the retailers were reported posting a flat price of $1 for 6 gallons. A few isolated stations were offering 7 gallons for $1.05. Some observers fear that the war will spread to Manhattan, the Bronk, Queens and other New York divisions unless curbed immediately.

The break in Brooklyn retail prices was reported due to under canopy competition where dealers are the sole judge of what prices shall be charged the consumer. There was no break in the tank-wagon market to justify the retail slashing. In fact, rumors were current that tankcar and tank-wagon prices may be elevated a half cent per gallon within the next few weeks.

Gulf Coast domestic and export markets were generally unchanged and the movement was reasonably high to contract accounts. However, there was very little business reported in the spot market either to North Atlantic or export accounts. Inquiries were infrequent, but those placed continued to feature gas oil and kerosene, following a trend established during the past two or three months.

Probably the outstanding feature of the July market so far was Standard Oil Co. of New Jersey's advances of 10 cents per barrel on diesel oil at several domestic, Canadian and South American ports. The same company advanced bunker fuel oil 10 cents per barrel at Albany and by approximately the same margin in most South American ports.

Bunker C fuel oil was raised from $1.55 to $1.65 per barrel at Albany, N. Y., and from 1 shilling, 4 pence to 3 shillings per metric ton in South American ports. The advance on diesel fuel was more general in American ports and was also applied to several Canadian and South American depots. Diesel oil was raised 10 to 10.5 cents per barrel at Albany, N. Y., to $2.20; at Boston, Mass., to $2.25; at Charleston, S. C., to $2.20; at Jacksonville, Fla., to $2.205; at New London, Conn., to $2.35; at New York to $2.20; at Norfolk, Va., to $2.20; at Panama City, Fla., to $2.205; at Port Everglades, Fla., to $2.31; at Port Tampa, Fla., to $2.205; at Portland, Maine, to $2.35; at Providence, R. I., to $2.25; at Savannah, Ga., to $2.205; and at Tampa, Fla., to $2.205.

Diesel fuel at Halifax, N. S., Montreal, P. Q., Quebec and St. John, N. B., was raised from 5 to 10 cents per barrel.

Heavy fuel oil for shore plant and industrial consumption remains one of the strong items in the petroleum products list. There is a growing feeling among marketers that demand for heavy fuel, although not expected to increase in proportion to gasoline and light distillate, probably will tax the normal refinery production before end of the year.

There was no change reported in the light fuel oil situation this week. The current prices are launched on a basis of 1937-38 winter season consumption. Movement to consumers remains satisfactory in consideration of the season since practically all burned at present is under water heaters and in a limited extent in connection with air-conditioning apparatus.

Distillate oil burner orders placed during the first five months of 1937 are more than 100 per cent in excess of those for the same period last year, accounting for the fact that most market observers are anticipating an increase in light fuel oil demand to the extent of 15 to 20 per cent. Distillate oil burner orders during May, the latest monthly figure reported by the Bureau of the Census, totaled 21,796, which was a reduction of nearly 5,000 compared to 26,743 ordered in April. However, this May's total was considerably above the 17,210 orders for units placed during the same month last year. For the first five months, distillate oil burner orders total 95,331 this year compared to 47,228 in 1936.

Industrial oil burner orders are less impressive, but still represent satisfactory increases over 1936. For May residual oil burner orders totaled 15,233 compared to 15,361 in April and with 12,730 in May, 1936. For the five months oil burner orders totaled 64,570 this year against 47,644 in 1936.

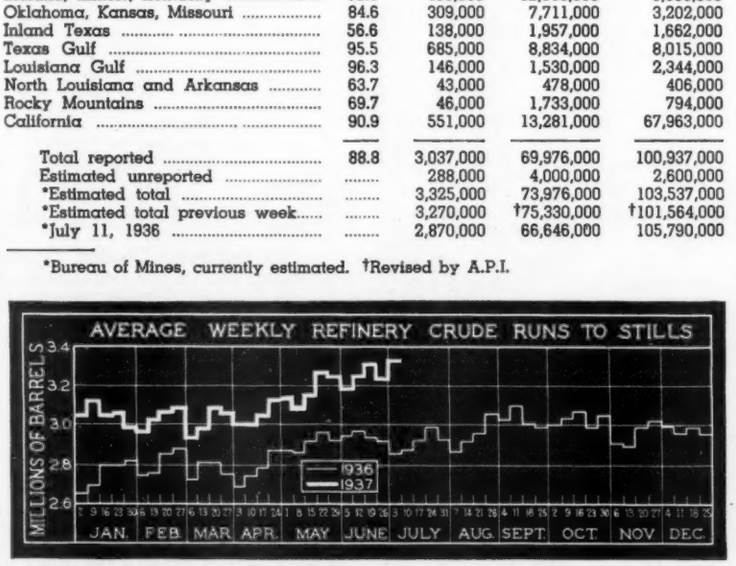
In the inland Pennsylvania refining district, gasoline continued in firm demand with considerable inter-refinery purchasing influencing prices.

A. P. I. Weekly Refinery Statistics

Week Ending July 10, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	563,000	18,882,000	9,646,000
Appalachian	88.4	106,000	2,902,000	807,000
Indiana, Illinois, Kentucky	92.1	450,000	12,668,000	6,098,000
Oklahoma, Kansas, Missouri	84.6	309,000	7,711,000	3,202,000
Inland Texas	56.6	138,000	1,957,000	1,662,000
Texas Gulf	95.5	685,000	8,834,000	8,015,000
Louisiana Gulf	96.3	146,000	1,530,000	2,344,000
North Louisiana and Arkansas	63.7	43,000	478,000	406,000
Rocky Mountains	69.7	46,000	1,733,000	794,000
California	90.9	551,000	13,281,000	67,963,000
Total reported	88.8	3,037,000	69,976,000	100,937,000
Estimated unreported	.....	288,000	4,000,000	2,600,000
*Estimated total	.....	3,325,000	73,976,000	103,537,000
*Estimated total previous week	.....	3,270,000	†75,330,000	†101,564,000
*July 11, 1936	.....	2,870,000	66,646,000	105,790,000

*Bureau of Mines, currently estimated. †Revised by A.P.I.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending June 19, 1937	307,465,000 barrels
Week ending June 12, 1937	307,199,000 barrels
Week ending June 20, 1936	312,420,000 barrels

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of July 13, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Chicago, Ill.	15.5	13.5	4.0	10.1
Decatur	15.5	14.0	4.0	10.1
Joliet	15.5	14.0	4.0	10.1
Peoria	15.5	14.0	4.0	10.1
Quincy	15 3	13 8	4 0	7.6
Davenport, Ia.	15.5	14.0	4.0	‡13.1
Des Moines	15.3	13.8	4.0	‡12 9
Mason City	15.7	14.2	4.0	‡13.3
Sioux City	15.5	14.0	4.0	‡13.1
Duluth, Minn.	17.3	15.8	5.0	10.9
Mankato	16.9	15.4	5.0	10.5
Twin Cities	16.9	15.4	5.0	10.5
Lacrosse, Wis.	16.9	15.4	5.0	10.5
Green Bay	17.2	15.7	5.0	8.6
Milwaukee	16 8	15.3	5.0	10.4
Detroit, Mich.	15.4	13.9	4.0	9.8
Grand Rapids	16 5	15.0	4.0	10.9
Saginaw	16.3	14.8	4.0	8.5
Evansville, Ind.	17.0	15.5	5.0	†10.6
Indianapolis	17.2	15.7	5.0	†9.6
South Bend	17.4	15.9	5.0	†9.6
Fargo, N. Dak.	16.9	15.4	4.0	11.5
Minot	18.1	16.6	4.0	12.7
Huron, S. Dak.	17.3	15.8	5.0	10.9
Kans. City, Mo.*	14.9	13.4	4.0	8.9
St. Louis*	15.2	13.7	4.0	9.8
St. Joseph*	14.9	11.4	4.0	6.9
Wichita, Kans.	14.4	12.9	4.0	7.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Atl'tic City, N. J.	13 5	12 0	4.0	8.0
Newark	13.5	12.0	4.0	8.0
Annapolis, Md.	15.6	14.1	5.0	10.0
Baltimore	15 0	13.5	5.0	8.5
Cumberland	17.4	14.9	5.0	10 0
Wash'g'n, D. C.*	13.0	11.5	3.0	9.0
Danville, Va.	18.2	15.7	6.0	12.9
Norfolk	17.0	14.5	6.0	11.5
Petersburg	17.3	14.8	6.0	11 7
Richmond	17 3	14.8	6.0	11 7
Roanoke	18.5	16.0	6.0	12.9
Charles'n, W. V.	16.8	14.3	6.0	12.6
Parkersburg	16.1	13.6	6.0	11.2
Wheeling	16 0	14.5	6.0	12.2
Charlotte, N. C.	19.4	16.9	7.0	13.6
Hickory	19 9	17.4	7.0	13.0
Mt. Airy	19.7	17.2	7.0	12.8
Raleigh	19.0	16.5	7.0	12.1
Salisbury	19.5	17.0	7.0	12.7
Charleston, S. C.	18.0	15.5	7.0	11.1
Columbia	19.0	16.5	7.0	12.1
Spartanburg	19.7	17.2	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington where a station price of 16.5 cents is in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Net dlr.	Inc. tax	tank-wag.
Atlanta, Ga.	22.0	19.0	7.0	*13.0
Augusta	21.0	18.0	7.0	*14.0
Macon	21.5	18.5	7.0	*14.5
Savannah	19.0	16.0	7.0	*12.0
Birm'ham, Ala.	19 5	16.5	8.0	12.0
Mobile	22.0	19.0	9.0	11.0
Montgomery	22.0	19.0	9.0	14.5
Jackson, Miss.	21.0	18.0	7.0	*13.0
Vicksburg	20.5	17.5	7.0	*13.0
Jacksonville, Fla.	20.5	17.5	8.0	11.0
Miami	20.5	17.5	8.0	†11.5
Pensacola	22 0	19.0	9.0	12.0
Tampa	19.0	16.0	8.0	10.5
Lexington, Ky.	20.0	17.0	6.0	11.0
Covington	19.5	16.5	6.0	11.0
Louisville	20.0	17.0	6.0	10.5
Paducah	20.0	17.0	6.0	8.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Denver, Colo.	17.5	5.0	11.5
Grand Junction	20.0	5.0	15.0
Pueblo	16.0	5.0	10.5
Casper, Wyo.	18.0	5.0	11.5
Cheyenne	18.0	5.0	13.0
Butte, Mont.	19.5	6.0	15.5
Billings	20.0	6.0	15.5
Helena	21.5	6.0	15.5
Great Falls	21.5	6.0	15.5
Salt Lake, Utah	19.5	5.0	16.0
Twin Falls, Ida.	21.5	6.0	18.0
Boise	21.5	6.0	18.0
Albuquerque, N. M.	17.5	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag. con'r.	Di-vided dlr.	Inc. tax	tank-wag.
Ohio points	17.0	16.0	5.0	*13.5

*Includes state tax of 1 cent.

Divided dealer price is also price to authorized agents, exclusive of .5 cent rental. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons gets service-station price.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	9.0
Fresno, Calif.	18.5	19.5	4.0	12.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	20.0	21.0	5.0	13.0
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	13.5
Spokane	23.0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.0	13.5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Albany, N. Y.	15.0	13.5	5.0	9.0
*Met. N. Y.:				
Manh't'n, Br'nx	15.0	13.5	5.0	9.0
Staten Island	15 0	13.5	5.0	9.0
Q'ns & Brklyn	15 0	13.5	5.0	9.0
Buffalo	15.3	13 67	5.0	8.5
Rochester	15 3	13.74	5.0	8.5
Syracuse	15 3	13.7	5.0	9.0
Boston, Mass.	12 8	12.5	5.0	8.5
Portland, Me.	15 8	13.5	5.0	8.75
Manch'ter, N. H.	16 3	14.0	5.0	9.5
Burlington, Vt.	15 9	13.9	5.0	9.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point; Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline		Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Omaha	17.9	16.4	6.0	10.4
McCook	18.0	17.1	6.0	10.0
Norfolk	18.3	16 8	6.0	10.8
North Platte	18.7	17.2	6.0	11.2
Scotts Bluff	19.4	17.9	6.0	10.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Muskogee, Ok.	15.0	5.0	7.0
Oklahoma City	15.0	5.0	8.0
Tulsa	14.0	5.0	7.0
Ft. Smith, Ark.	15.0	5.0	10.0
Little Rock	17.5	7.5	9.5
Texarkana	15.0	5.0	9.0

Texas

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.5	18.5	5.0	8.0
San Antonio	14.5	18.5	5.0	8.0

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag
N. Orleans, La.	20 5	18 0*10 0		†14 0
Baton Rouge	18 5	16 0	8 0	12 0
Alexandria	19 0	16 5	8 0	12 0
Lafayette	19 5	17 0	8 0	12 5
Lake Charles	19 5	17 0	8 0	12.5
Shreveport	18 0	15 5	8 0	9.5
Knoxville, Tenn.	21 5	19 0	8 0	14 0
Memphis	19 5	17 0	8 0	12 0
Chattanooga	21 0	18 5	8 0	13.5
Nashville	20 5	18 0	8 0	11 0
Bristol	20.25	18.5	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 24 and 22 cents per gallon, respectively.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Philadelphia, Pa.	14.0	12.5	5.0	10.5
Pittsburgh	15.5	13.5	5.0	11.0
Allentown	14.5	13.25	5.0	11.0
Erie	14.5	13.0	5.0	10.0
Scranton	14.5	13.25	5.0	11.0
Altoona	15.5	13.5	5.0	11.0
Dover, Del.	14.0	....	5.0	11.0
Wilmington	13.5	....	5.0	11.0
Springf'ld, Mass.	14 8	....	4.0	9.0
Worcester	13 8	....	4.0	9.0
Hartford, Conn.	14 6	....	4.0	9.0
New Haven	14.0	....	4.0	9.0
Providence, R. I.	12.0	....	3.0	8.25

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	16.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N.S.	24 0	8.0	18.5
St. John, N.B.	24.0	8.0	18.5
Montreal, Que.	21.0	6.0	17.5
Toronto, Ont.	22 0	6.0	17.0
Hamilton, Ont.	22.0	6.0	17.0
Winnipeg, Man.	28.2	7.0	20.7
Brandon, Man.	29 8	7.0	22.3
Regina, Sask.	29 5	7.0	22.0
Saskatoon, Sask.	32 3	7.0	24.8
Edmonton, Alta.	30 5	7.0	24.2
Calgary, Alta.	28 0	7.0	21.5
Vancouver, B.C.	23 0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Standard Oil Co. of New Jersey July 12 advanced tank-wagon gasoline .5 cent throughout its territory.

Standard Oil Co. of Kentucky July 1 reduced tank-wagon and dealer gasoline 1 cent in Tampa following elimination of 1-cent city tax, and reduced tank-wagon kerosene .5 cent.

Continental Oil Co. May 29 reduced dealer gasoline 1.5 cents in Billings.

Standard Oil Co. of Louisiana July 12 advanced tank-wagon gasoline .5 cent throughout its territory.

Texas Wildcats

(Continued from Page 121)

cor. County. Andrew Jones Sur. 114. Drlg. 1,175 ft.

H. A. Swann Jr. No. 1 Keith & Swann, Hawley Twest, 150 ft. from N and E of Blk. 68. Hawley Twest. Loc.

L. B. Tannehill et al No. 1 Willis, 2 mi. NW Sandy Ridge pool, sec. 2, J. C. Patton Sur. Drlg. 1,400 ft.

Texas Inland Oil Co. et al No. 1 Rowell, 5 mi. E Anson, sec. 37, O.A.L. Sur. Fsg. 1,655 ft.

Shackelford County

Ben Banner No. 1 Dawson & Conway, 4 mi. NE Morris-Buie pool, sec. 176, E. T.R.R. Sur. Sand 1,349-55 ft.; prep. to test; drlg. 1,705 ft.

Humble O. & R. Co. No. 4 Geo. DeLafosse, E C line county, sec. 1550, T.E.&L. Sur. Drlg. 3,475 ft.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of July 13, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400 grades:		
62 oct. and below (3d gr.)	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
64-66 375	.05⅛	.05⅜
68-70 360	.05⅛	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400	.05	.05¼
64-66 375	.05	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below		.05½
63-67 octane	.05¾	.06
68-70 octane (regular)		.06½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below		.05½
63-67 octane	.06	.06½
68-70 octane (regular)		.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
60-62 400 grades:		
62 octane and below	.05	.05¼
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.06	.06¼
64-66 375	.05	.05¼
68-70 360	.05⅛	.05⅜

PENNSYLVANIA (Inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.06	.06⅛
60-64.9 octane	.07⅜	.07½
65-70 octane	.07½	.07⅝
64-66 375	.06⅛	.06¼
68-70 350	.06¼	.06⅜

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½	.08½
58-60 400, 65 oct. and higher	.08¼	.09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.07¼
Baltimore		.07¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)	.07½	.07¾
Philadelphia	.07½	.07¾
Boston		.07¾
Baltimore	.07½	.07¾
Charleston, S. C.		.07¾
U. S. Motor, 65 and above:		
*New York (Bayonne)	.08	.08½
Philadelphia	.07¾	.08¼
Boston	.08	.08½
Baltimore		.08
Charleston, S. C.		.08

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.06	.06½
60-64.9		.06¼
65 octane and higher		.06½

Naphtha

PENNSYLVANIA (Inland refineries)—

50-52 450 (blending)	.05¾	.05⅞
52-54 450 (blending)	.05¾	.05⅞
54-56 450 (blending)	.05⅞	.06

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04¾	.04⅞

NORTH TEXAS—

Grade 26-70		.04⅛
Grade 18-55	.04⅞	.05

CALIFORNIA—

75-85 375-390	.06¾	.07⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04	.04⅛

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04⅛	.04¼
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.04½	.04⅝
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04¾	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04⅛	.04¼
42-44	.04⅜	.04½
41-43	.04¼	.04⅜

NORTH TEXAS—

41-43	.04¼	.04⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04½	.04⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43		.04¾

PENNSYLVANIA (Inland refineries)—

45		.05
46		.05½
47		.05¼

CHICAGO (Based on Group 3)—

41-43	.04⅛	.04⅜
42-44	.04⅜	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04	.05

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.05¾

***GULF COAST (domestic)—**

41-43	.04⅞	.05

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03¼	.03½
No. 3, zero to 15, 28-32	.03⅛	.03⅜
No. 3, 15 and above, 28-32	.02⅝	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03⅜	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03⅝

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03¼	.03½
No. 3, zero to 15, 28-32	.03⅛	.03⅜
No. 3, 15 and above, 28-32	.02⅝	.02¾

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¾
*No. 2	.05⅝	.05⅞
*No. 4	.05⅛	.05⅜

Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.03	.03½
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH TEXAS—

U.G.I. gas oil	.03	.03½
No. 4, low cold test, 24-28	1.05	1.12½
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅞	.03
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (Inland refineries)—

36-40	.04⅝	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.15	1.35
24 plus diesel, per bbl.	1.17	1.35
24 plus diesel (bunkers)	1.50	1.65
12-16 (bunkers at tidewater)	1.05	1.20
10-16 (cargo lots)	.95	1.10
12-17 (tankcars)	1.00	1.15
10-17 (high sulfur)	.60	.90
San Joaquin Valley:		
10-18 (tankcars)	.80	1.00
24 plus diesel, per bbl.	1.45	1.65
San Francisco:		
27 plus diesel		1.65
24 plus diesel (bunkers)		1.70
10-16 (bunkers)		1.15

GULF COAST—

28-30 gas oil	.04⅛	.04¼
28-30 diesel (bunkers)	1.65	1.90
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		1.05

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¼c per bbl.)		2.20
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)	1.35	1.50
Industrial fuel (tankcars)		.04½

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.23
150-160 D, 0-10		.20
150-160 D, 15-25		.19½
150-160 E, 15-25		.19
100-110 D, 0-10		.18
Steam refined:		
631 green (treated)		.16½
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 540-550 flash):		
10 pour test	.26	.26½
15 pour test	.25	.25½
20 pour test	.24	.24½
25 pour test	.23	.23½
Steam refined:		
600	.15	.15½
650	.17½	.18
600 Pennsylvania flash	.18½	.19
630 flash	.22½	.23
600 Warren E filtered	.18½	.19

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-3½		.13
400-3½		.14
100-2½ paraffin oil		.05¾
15-20 Cold Test:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.07	.08
200-2½-3	.07	.08
300-2½-3	.07	.08
400-3-4	.09	.11
540-3-4	.09	.11
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07	.08
300-5-6	.07	.08
350-5-6	.10½	.11½
400-5-6	.10½	.11½
450-5-6	.10½	.11½
500-5-6	.10½	.11½
600-5-6½	.10½	.11½
700-6½ plus	.10½	.11½
750-6½ plus	.10½	.11½
900-6½ plus	.10½	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.23½	.24
10 pour test	.22½	.23
15 pour test	.22	.22½
25 pour test	.21	.21½
180 vis. at 70° F., 3 color:		
25 pour test	.24	.24½
200 vis. at 70° F., 3 color:		
Zero pour test	.28	.28½
10 pour test	.27	.27½
15 pour test	.26½	.27
25 pour test	.25½	.26

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.03

PENNSYLVANIA (Inland refinery)—

122-124 (a.m.p.) w.c. scale	.0295	.0300
124-126 (a.m.p.) w.c. scale	.0300	.0305

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0295	.0300
124-126 (a.m.p.) y.s.	.0265	.0280
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¼	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05⅞	.06
60-62 400	.06	.06⅛
61-63 390	.06⅛	.06¼
64-66 375	.06¼	.06⅜

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white	.04⅞	.05
41-43 water white		.05
44 water white	.05	.05⅛

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.26½	.27
600 S.R. unfiltered	.24	.24½
630 S.R. unfiltered	.25½	.26
600 flash, S.R.	.26½	.27
630 flash, S.R.	.31½	.32
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution	.31½	.32

NEUTRAL OIL

200-3 color	.34	.34½
150-3 color	.29½	.30

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0295	.0300
124-126 y.s.	.0265	.0280

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas (May 22, 1937)*	$1.35
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Co., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La.	See note below
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Lafitte, La.	1.24
Livingston, Tex.	1.27
Heyser, light (Nov. 1, 1936)	1.15
Heyser, heavy (Nov. 1, 1936)	.90
Placedo (Nov. 1, 1936)	.90
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Greta, Refugio, O'Connor, McFadden, Saxet, Segno, Taft, Tomoconnor and Plymouth take same gravity prices as Gulf Coast, Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light.*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1.33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.23
Rock Creek, Wyo.†	1.20¼
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Middle Western States

OHIO OIL CO.
(Effective January 28, 1937)

Lima	1.25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich.	1.42
West Branch, Mich. (July 1, 1937)	1.21
Buckeye (March 16, 1937)	1.39½
Arenac, Mich. (July 1, 1937)	1.21
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1.09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.
(Effective June 7, 1937)

Bradford, Pa.	$2.82
Allegany, N. Y.	2.82

SOUTH PENN OIL CO.
(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.57
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.52
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.37
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Jan. 29, 1937)	1 42

PENNZOIL CO.
(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.82
Group B — Includes Tidioute district.	2.81
Group C — Includes Turkey and Tidioute districts.	2.80
Group D — Includes Bear Creek and Porkey districts.	2.79
Group E — Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on lengths of pipe line haul to plant at Oil City.	2.76

PURE OIL CO.
(Effective June 7, 1937)

Cabin Creek, W. Va.	2.52
Bradford Hollow, W. Va.	2.52
Kelly Creek, W. Va.	2.52

Canada

Ontario (Sept. 9, 1933)*	
Petrolia	$2.10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2.60
Discolored naphtha, 65 gravity and higher	2.38
Discolored naphtha and crude oil, 40-40.9 gravity	1.88
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.27

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.34

*In U. S. currency, f.o.b. ship, based on April spot market transactions.

Rocky Mountain Runs

Estimated daily average production in the week ending July 10:

WYOMING	
Salt Creek	15,690
Big Muddy	1,390
Dallas Derby	570
Garland	2,790
Grass Creek	720
Hamilton dome	2,040
Hidden dome	360
Labarge	990
Lance Creek	11,190
Lost Soldier	1,270
Medicine Bow	3,100
Oregon Basin	2,550
Osage	890
Quealy dome	800
Rock River	1,120
South Casper	460
Miscellaneous	1,850
Total Wyoming	47,780
MONTANA	
Border	180
Cat Creek	650
Cut Bank	10,300
Dry Creek	20
Kevin-Sunburst	5,000
Lake Basin	20
Pondera	1,410
Total Montana	17,580
COLORADO	
Florence	120
Fort Collins and Wellington	260
Iles dome	2,430
Moffat	440
Orchard	20
Rangely	80
Tow Creek	160
Price	780
Total Colorado	4,290
NEW MEXICO	
Cooper	6,540
Eaves	1,150
Eunice	31,700
Hardy	1,130
Hobbs	20,010
Jal	1,290
Langlie	1,660
Lynch	840
Lynn	260
Mattix	1,660
Monument	34,350
North Lynch	60
Penrose	2,860
Rhoades	60
Skelly	1,300
South Eunice	1,660
Vacuum	20
Artesia	6,820
Getty	200
Hogback	200
Rattlesnake	752
Table Mesa	90
Total New Mexico	114,612
Total Rocky Mountain region	184,262

East-Central Alberta

In the Cummings district, East-Central Alberta, Altoba Gas & Exploration Co. is rigging up for No. 2 test in NE section 35-47-7w4.

In the Ribstone field, Dina Oil & Refining Co. No. 4, 200 yards south of No. 3 producer, is rigging, to spud this month. Refinery equipment is being brought in to treat production from No. 3.

Crude Prices by Gravities

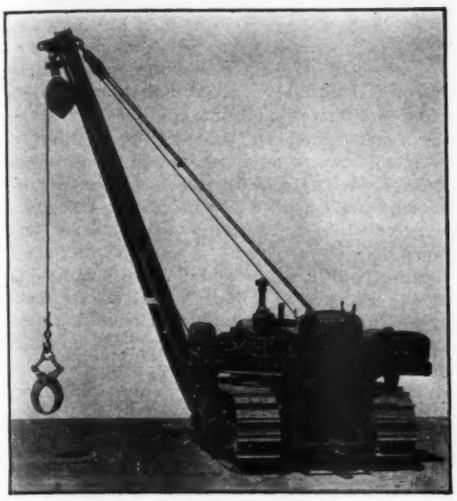
	1 Oklahoma-Kansas	2 Oklahoma-Kansas	3 North and Central Texas	4 East Central Texas (Mexia district)	5 North Louisiana-Arkansas	6 Gray County, Texas	7 Hutchinson-Carson counties, Texas	8 Rodessa, Louisiana-Texas and Panola County, Texas	9 Conroe, Tomball, Raccoon Bend, Deep, Satsuma	10 Gulf Coast	11 Gulf Coast	12 Lea County, N. Mex. West Texas except Pecos County,	13 Mirando district, Texas	14 Marion County, Texas	15 Refugio, Greta, Saxet, Taft, Texas	16 Anahuac, Flour Bluff, Dickson, Turtle Bay	17 White Castle, Louisiana	18 Iowa, Louisiana	19 Cayuga, Texas
Bel. 18	....	....	....	....	....	....	....	....	....	$ .90	....	....	....	....	....	....	....	....	$ .90	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	....	.92	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	....	....	$ .94	.94	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$ .95	....	$ .96	....	$1.01	....	....	.96	.96	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.98	....	1.03	....	....	.98	.98	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	1.00	....	1.05	....	....	1.01	1.01	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	1.02	....	1.07	....	....	1.04	1.04	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.04	....	1.09	....	....	1.07	1.07	....
Bel. 25	....	$ .98	....	....	$ .90	....	....	$ .93	....	....	....	....	....	$ .90	....	....	....	....	....	$ .88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$ .78	1.06	.92	1.11	....	....	1.10	1.10	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	1.13	....	....	1.13	1.13	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	1.15	....	....	1.15	1.15	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	1.17	....	....	1.17	1.17	.96
Bel. 29	$1.06	....	$ .96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	1.19	....	....	1.19	1.19	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	1.21	$1.16	....	1.21	1.21	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	1.23	1.18	....	1.23	1.23	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	1.25	1.20	....	1.25	1.25	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	1.27	1.22	....	1.27	1.27	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	1.29	1.24	....	1.29	1.29	1.08
Bel. 35	....	....	....	....	....	$ .96	$ .91	....	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	1.31	1.26	....	1.29	1.29	....
36-36.9	1.22	1.22	1.12	1.19	1.13	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	1.33	1.28	....	1.29	1.29	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	1.35	1.30	....	1.29	1.29	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	1.37	1.32	....	1.29	1.29	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	1.39	1.34	....	1.29	1.29	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	1.41	1.36	....	1.29	1.29	....

Column 1—Companies posting are Barnadall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.
Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.
Column 3—All purchasers.
Column 4—Humble Oil & Refining Co. and Sinclair Oil Purchasing Co.
Columns 5, 6, 7 and 8—All purchasers.
Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)
Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)
Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.
Column 12—All purchasers.
Column 13—All purchasers (effective July 6, 1937).
Column 14—Magnolia Petroleum Co.
Column 15—Humble Oil & Refining Co. (effective July 6, 1937).
Column 16—Humble Oil & Refining Co. prices start at 30-30.9 gravity at $1.16 adding 2 cents for each degree upward to and including 40 and over at $1.36.
Columns 17 and 18—Shell Petroleum Corp.
Column 19—Tide Water Oil Co.

NEW OR IMPROVED EQUIPMENT

Muskogee Offers Pipe-Laying Boom With Useful Features

The Muskogee Iron Works, Muskogee, Okla., builder of well-servicing hoists and pipe-laying equipment, announces the new Model B-1 pipe-



laying boom for International Harvester Company TA-40 and TD-40 TracTracTors. The Model B-1 boom is equipped with a 5-speed transmission, which allows a range of single line speeds of 22 to 342 feet per minute with a single line pull of 24,000 to 3,300 pounds. Both load- and boom-drums are free-rolling and are mounted on stationary shafts. Power from the tractor engine is transmitted from the tractor power takeoff-shaft through an oilbath chain drive to an extension of the high-speed shaft of the 5-speed transmission. A chain drive connects the low-speed shaft of the transmission to a countershaft on which are mounted clutches to operate the load- and boom-drums simultaneously or individually.

The boom itself is designed with a wide opening at the top so that the 10-inch oilbath self-aligning ball-bearing sheave can turn or swing as much as necessary without fouling the sides of the boom. The boom frame is made of heavy channels, welded together and securely bolted to large axles which transmit the load equally to the track support members of the tractor.

The boom has incoporated many desirable features, such as: oilbath ball or roller bearings; spring attachment to prevent boom from sticking in upright position, perfect visibility from the driver's seat; adequate brakes to hold or release the load; provisions for sufficient counterweights to allow the use of the boom with heavy pipe; equal weight distribution; and automatic release which prevents the boom from being pulled into the frame and either bent or broken.

Here and There With Men Who Manufacture Equipment

The Thermoid Rubber Co., Trenton, N. J., has added to its engineering staff George J. Wyrough, who will be assigned to development work on industrial rubber products, including belting, hose and packings.

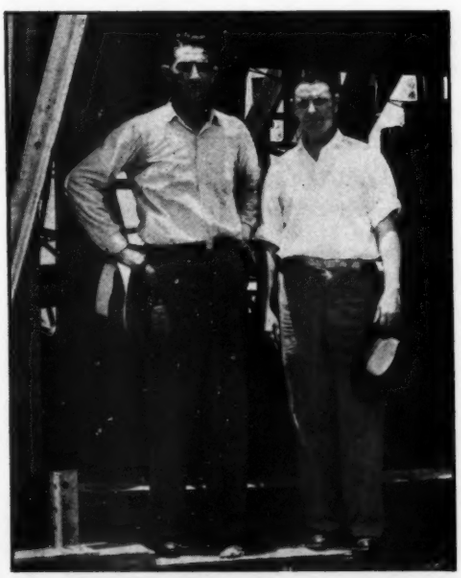
The Terry Steam Turbine Co., Hartford, Conn., has appointed the following representatives who will handle Terry turbines, reduction gears, turbo-generator units, etc.: Walter Cooke, 846 Baronne Street, New Orleans, La.; Cowles & Co., 509 Mercantile Building, Dallas, Tex.; M. N. Dannenbaum Co., 202 Petroleum Building, Houston, Tex., and W. V. C. Jackson, National Bank of Tulsa Building, Tulsa.

The Hancock valve division of the Consolidated Ashcroft Hancock Co., Bridgeport, Conn., has made James A. Gibbons, formerly with the Peabody Engineering Corp., a member of its field sales organization as a specialist in industrial power plant and public utility construction work.

H. B. Allen, for 14 years New York district sales manager for the Babcock & Wilcox Tube Co., has resigned to become vice president of John B. Astell & Co., Inc., 90 West Broadway, New York, distributor in the New York metropolitan district of B&W seamless carbon steel boiler tubes and alloy tubes, and other tubular products.

Fred E. Cooper, general oil-field distributor of Allis-Chalmers well-servicing units and Allis-Chalmers power engines, will be host to several organizations allied with the oil industry at the plant on the Sand Springs road, Tulsa, July 20 from 4 to 9 p.m. The groups include the Tulsa A.P.I. chapter, the Engineers Club of Tulsa, the Petroleum Motor Transport Association, and the Tulsa Purchasing Agents Association. Inspection of the establishment will precede a buffet supper served at 6.

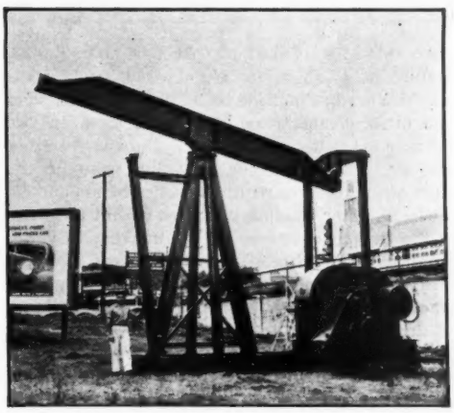
The eastern sales office of the Union Steam Pump Co., Battle Creek, Mich., has been moved to the Chamber of Commerce Building, 1 Newark Avenue, Jersey City. R. W. Friedman, manager.



Jack Morris (left), in the drilling department of the Caribbean Petroleum Co., Maracaibo, Venezuela, is combining a vacation in the Gulf Coast with field trips to inspect new methods and operating practices. With him in the picture is Thad L. Putnam, New York representative of various oil tool companies, in the Hastings field, Brazoria County, Texas. Mr. Morris intends to remain in the United States until September 15.

Simplicity and Strength Are Combined in Pumping Unit

Combining simplicity with ruggedness, the new pumping unit built by the Happy Belting Co., Tulsa, has claims to several distinctions. It is chain-driven



and uses an idler for chain take-up which simplifies adjustment and assures that important requirement, parallel shafts.

The offset construction permits the operator a wide range of belt applications, the unit accomodating a 16-inch flat belt or up to 12 D V-belts, and on pulleys up to 64 inches in diameter.

Especial attention has been paid to bearings. With heavy SKF wristpin bearings, 4½- and 6-inch Timkens on the shafts, extra large center iron, equalizer and polish-rod bearings, it is claimed that long, trouble-free life has been built into the unit.

D. M. McCargar Advanced

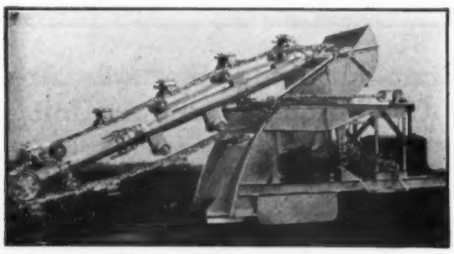
D. M. McCargar, formerly manager of the Tulsa office of the Allis-Chalmers Manufacturing Co., Milwaukee, Wis., has been advanced to the position of engineer, petroleum industry, for that organization. His headquarters will continue to be in Tulsa. Mr. McCargar, who has had wide experience in the field of electrical engineering, will be available in an engineering capacity to all district offices of the company in connection with the sale of electrical products to the petroleum industry. His work will be chiefly along the line of technical adviser pending sales negotiations and giving salesmen training in the division of oil-industry equipment. Oscar A. Haas succeeds Mr. McCargar as manager of the Tulsa district.

Kropp Forge Adds New Plant

The Kropp Forge Co., 5301 West Roosevelt Road, Chicago, maker of rough and finished drop and hammer forgings, is constructing a new building of 15,000 square feet to house its added machine-shop facilities. This building will be set apart from the hammer shop to allow for producing precision machine work, and will be equipped with modern high-speed machine tools for rough and finish machining of small and large forgings to 30 tons in weight.

Shiftable Boom Is Advantage of New Model Buckeye Ditcher

To meet the demand for a smaller ditcher with the operating advantages of its model 160, the Buckeye Traction Ditcher Co., Findlay, Ohio, has brought



out model 120. This latest ditcher's outstanding feature is its shiftable boom, which enables the machine to dig alongside curbs, close to trees, poles and other obstructions. This boom rides on two heavy steel tubes and is readily moved to either side or to any intermediate point, bringing the edge of the ditch to within 4 inches of the outside of the alligator traction treads or within 10 inches of the overall clearance of the machine. Overall width of the machine is 6 feet 3 inches.

Two telescoping sections provide means of readily adjusting the boom for normal maximum cutting depths of 6 feet, 8 feet, or 10 feet. Cutting widths range from 16 to 30 inches. A saving in weight is effected by use of 100% electric alloy, heat-treated steels throughout the machine. This adds to the ease with which the machine can be maneuvered in close quarters. Bearing pressure on the alligator treads is reduced to approximately 9 pounds per square inch. Low overhead clearance and low center of gravity with the boom raised for travel are advantages.

In Sales Work for O'Bannon

Walter O'Bannon, Jr., vice president of the Walter O'Bannon Co., Tulsa, has returned from Mount Pleasant, Mich., where he was working in the interests of the company. He will reside in Tulsa and be engaged in sales promotional work in the Mid-Continent and Gulf Coast fields. Mr. O'Bannon attended St. Albans College and the University of Pennsylvania, and he graduated from Stanford University, Palo Alto, Calif., in 1935, his courses being designed to qualify him to carry on the business of manufacturing oil-well supplies. Since leaving Stanford he has been connected with the Walter O'Bannon Co. of California, West Coast distributor, and engaged in special assignments in eastern oil-producing states.

Bulletins, Booklets and Other Literature for the Trade

The elaborate precautions observed in drilling at the Old Ocean field on the Texas Gulf Coast are described in the latest issue of the Yellow Strand, published by the Broderick & Bascom Rope Co., St. Louis, Mo.

The Century Electric Co., 1806 Pine Street, St. Louis, Mo., has published two bulletins, one on Century direct-current motors, 1 to 300 horsepower, and one on Century slip-ring motors, 1 to 350 horsepower.

The engineering drafting-room chart brought out last fall by the Lincoln Electric Co., Cleveland, Ohio, to provide in concise form, data necessary for producing arc-welded designs, is being revised. It will give the weld symbols adopted by the American Welding Society in May, 1937.

Industrial air-filters are described and illustrated in an eight-page bulletin issued by the Air-Maze Corp., 812 Huron Road, Cleveland, Ohio.

"Resistance to Wear and Impact Required in Slushpump Valves" is the subject of a useful article in the latest number of Nickel Steel Topics, published by the International Nickel Co., 67 Wall Street, New York.

The Waukesha Engineering Record makes its initial appearance this month as the news organ of the Waukesha Motor Co., Waukesha, Wis. Among its articles is one telling how automatic control makes a gas engine convenient as an electric motor.

The type T stationary Alco-Sulzer two-cycle diesel engine is the subject of an illustrated bulletin offered by the diesel engine division of the American Locomotive Co., 30 Church Street, New York. A similar bulletin gives information concerning the type TM marine direct reversible two-cycle diesel.

A complete new line of Isco pumping units is announced in a 4-page illustrated bulletin prepared by the International Supply Co., Tulsa.

An attractive folder describing the corrosive action of acid and water carried by fuel oil and its effect upon diesel engines has been issued by the Cunningham Co., 4252 Santa Monica Boulevard, Los Angeles, maker of Cunningham fuel dehydraters. The booklet tells how to neutralize the acid and dry out the moisture through a new process.

The 1937 edition of "Synthetic Organic Chemicals," published by the Carbide & Carbon Chemicals Corp., Department G, 30 East Forty-second Street, New York, is a 78-page reference manual on the specifications, properties, and uses of over 80 aliphatic organic chemicals.

"Built To Endure," a 16-page sales brochure issued by the Mercoid Corp., 4213 Belmont Avenue, Chicago, describes the Sensatherm thermostat, Pyratherms, line safety controls, limit and low-water controls for steam boilers, temperature-limit controls, warm-air furnace controls, and sealed mercury contact switches.

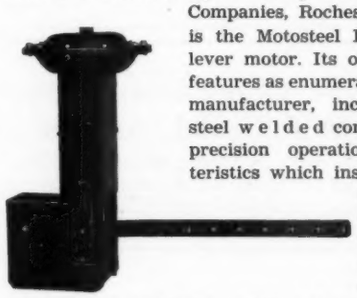
Size and Capacity of Axelson's St. Louis Plant Are Doubled

The Axelson Manufacturing Co. has reconstructed its St. Louis, Mo., plant, doubling the original size and capacity. Modern normalizing and

heat-treating furnaces and the most accurate machine-tool equipment have been installed. New laboratory facilities for testing and checking the company's products are another improvement. The photograph shows the inspection and assaying of couplings in the new plant.

Usual Shortcomings of Lever Motor Said to Be Overcome

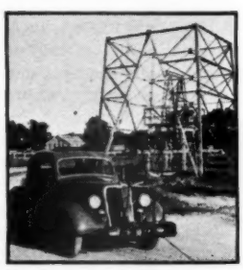
A new lever motor designed specifically to overcome traditional shortcomings of this type of device, announced by the Taylor Instrument Companies, Rochester, N. Y., is the Motosteel Evenaction lever motor. Its outstanding features as enumerated by the manufacturer, include: All-steel welded construction; precision operation characteristics which insure a uniform relation between the air pressure applied to its diaphragm motor and the resulting lever travel throughout its stroke; practical freedom from hysteresis; take-off holes throughout the length of the lever, so that the force or travel of the motor may be adjusted; power of either up-stroke or down-stroke can be increased or decreased by spring adjusting nut; lever action can be reversed by substituting another lever and transposing the fixed and movable pivots; limit stops for both up-stroke and down-stroke; base is drilled for mounting on floor, wall or ceiling, making possible an infinite number of mounting positions; three sides of lever motors; may be operated by remote manual control, by an electro-pneumatic switch or by a pneumatically operated controller. It also may be operated in parallel with a diaphragm valve or other pneumatic equipment if desired.



The design and operating features recommend this new lever motor for the operation of dampers, lever-operated valves, butterfly valves, electrical rheostat for variable-speed motors, for the control of electrical equipment, or for the operation of any device by the conversion of pneumatic energy to linear or angular mechanical motion.

Convenient Hoist for Oil Fields Is Mounted on Car or Truck

The K O T erection hoist, manufactured by the K O T Rig Supply Co., Sand Springs, Okla., is designed to be mounted on the front of any model of any make of car or truck, and it is powered from the car motor. The hoist consists of a spooling-drum at one end and a cathead at the other, with a differential gear between the two. It is also equipped with a transmission and a compounding gear.

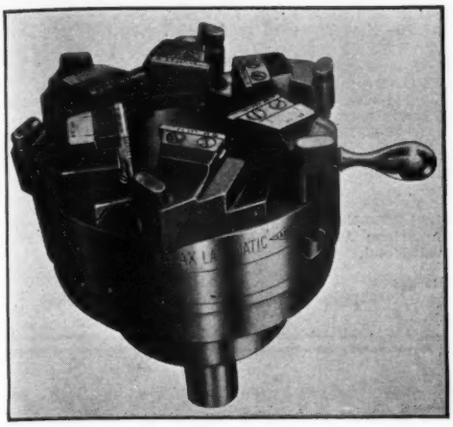


The cathead is used as a jerkline to drag material on the ground. The drum is for hoisting and lowering materials, using a wire line. This hoist was designed and built primarily for the erection and dismantling of oil-field derricks, minimizing accident hazards resulting from the use of a cathead. The machine is always ready for use.

Operation of the hoist is controlled by a brake-lever. A load can be raised, lowered or slowed up by mere pressure forward of the lever, and the load is brought to a dead stop by pressing the lever backward. When the hoist is not in use the transmission is shifted into neutral position. Installation of the hoist does not interfere with operation of the car in any way. The extra weight on the front end is no hindrance to easy driving and it places the hoist in a convenient location for use, especially to pull out of a mudhole or to assist another vehicle out of a similar difficulty.

New Diehead Is Added to Line of Landis Threading Tools

The Landis Machine Co. of Waynesboro, Pa., has added a new diehead to its line of threading equipment. The diametrical capacity of the head is 4 to 5⅛-inch with a pitch range of 7 to 20 threads



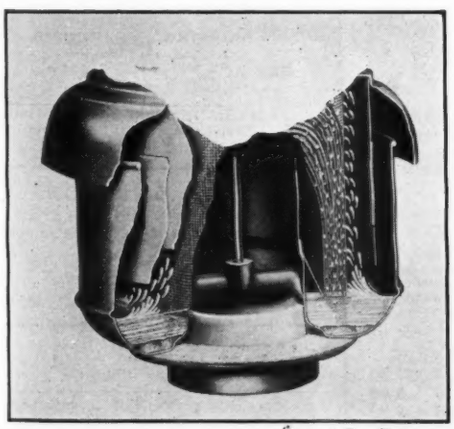
per inch. Thread length takes in an exceptional range. The head illustrated has a capacity of 7-inch thread length on 5⅛-inch diameter.

The new diehead belongs to the Landmatic series and is of the self-opening, pulloff type for application to turret lathes, and to hand screw machines. It is heat-treated throughout and ground for maximum wearing qualities. Diametrical graduations on the circumferential surface and micrometer graduations on the adjusting-screw insure rapid and accurate size changes.

The 40 AX Landmatic head carries 6 chasers mounted on the face of the head similar to the 4-chaser diehead. By using 6 chasers instead of 4, the cutting load is more widely distributed. Thus the working parts of the head, as well as the part being threaded, are subject to much less cutting stress. The results are an increase in tool life with more threads obtained per grind, of the chaser, improved quality of the product being threaded, and also an increase in the life of the diehead.

Air-Maze Filter Unit Needs No Relief Valves for Backfires

To meet the need for an oilbath type air-filter that would not only give efficient service as an air-cleaner, but would withstand any backfires, en-



Patent Pending

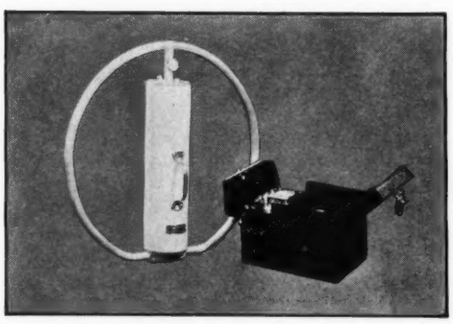
gineers of the Air-Maze Corp., 812 Huron Road, Cleveland, Ohio, have designed a new type filter unit. The new unit eliminates relief valves on the intake pipe elbows or ends of large engines, as a backfire valve may be incorporated, upon request, as an integral part of the air filter.

When air is drawn under the hood edge and passes down the skirt, the oil in the sump automatically washes the large circumferential filter element which is constructed of a maze of alternately placed and exactly spaced flat and crimped galvanized screens having selected meshes. The top or hood of the new filter is fitted with a complete backfire valve assembly mounted on a web casting which screws onto the filter center stem. The valve rests on leakproof gaskets and is spring loaded. It quickly returns to normal position after relieving pressure. In the illustration the valve is shown in raised position as though a backfire had just occurred.

Radio Designed to Identify and Follow Underground Lines

Engineering Laboratories, Inc., Tulsa, affiliated with Seismograph Service Corp. and specializing in the manufacture of seismic equipment and special electrical, radio and mechanical engineering, has announced a pipe line radio especially designed for an unskilled person to operate. An underground line can be identified promptly, according to the manufacturer, and followed without the confusion which often results from close proximity to parallel lines, crossings, etc.

Laterals are identified by the presence of a distant signal taking off to one side of the main line and swedges are identified by sudden decrease in signal strength when the pipe line decreases. By



holding the receiver by the handle in a horizontal position close to the ground and moving back and forth over the probable location, the signal will completely disappear when the receiver is directly over the pipe. The instruments come complete with cases, two spears and leads for connecting the transmitter to line batteries and head phones.

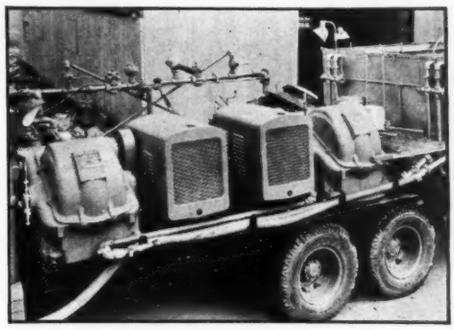
Ensign to Open Dallas Branch

Gilbert Woodill, sales manager for the Ensign Carburetor Co., Ltd., Huntington Park, Calif., announces arrangements for the opening of a branch in Dallas, Tex., where the company will maintain complete stocks of all sizes of Ensign equipment for distribution to sales and service representatives, as well as to users in the various Texas, Mid-Continent and Gulf Coast oil fields. He will leave shortly for Dallas to supervise the opening of this branch, which he plans to have ready for business early in August.

Opening of the Dallas branch follows a personal survey of the Texas, Mid-Continent and Gulf Coast territory last May by Mr. Woodill and his recommendation to the officials of the company. In many respects this branch will be similar to the one opened by the company in Chicago last year. Carburetors and fuel-regulating equipment will be shipped from the factory to its newest branch in semi-assembled condition. L. C. Arter will be in charge of the Dallas branch. He has been with the company 15 years.

Cementing Pumps Are Driven Now by Gasoline Engines

The picture illustrates current practice in powering oil-well cementing pumps. Since all oil wells are not steam-driven, oil-well cementing compa-



nies have equipped their pumps with gasoline motors. The Gardner-Denver 12x5 pumps shown are driven by 85 horsepower Ford V-8 engines.

Rotary-Hose Coupling Reduces Danger of Leaks in Drilling

The Goodall Rubber Co., 5 South Thirty-sixth Street, Philadelphia, Pa., has developed the Barney coupling, which, applied to Goodall Long-life rotary hose, is said to have demonstrated its superiority after intensive tests on 9,000-foot drilling at pressures ranging from 1,000 to 3,000 pounds. The Barney coupling has no clamps outside the hose or stems inside, thus virtually eliminating hazards of leaks at high pressures. By removing the stems from the bore of the hose longer life is claimed as there is no metal to wear thin and cut the rubber tube of the hose.

The Barney fitting is built into the hose, which makes the hose and the coupling one unit. It can be transferred to a new hose after the old one has given its maximum service. All Goodall Long-life rotary hose equipped with Barney couplings has the "full flow" feature.

J. P. Ratigan on Overseas Trip

James P. Ratigan, of Los Angeles, head of the organization manufacturing the Ratigan Sure Grip line of oil-field products, left recently for a trip to England, Ireland and Scotland, where he will combine business and pleasure for several months. He planned to sail from New York on the Manhattan. During his sojourn in Ireland, the land of his birth, Mr. Ratigan will visit his brothers, sisters and old college friends. Returning, he will sail from Queenstown Harbor, Ireland, on September 22, arriving in this country in time to attend the Oil World Exposition to be held in Houston, Tex.

Oil Man's Calendar

August

10-15—Mount Pleasant, Mich., Third Michigan Oil and Gas Exposition.

September

6-10—Rochester, N. Y., American Chemical Society.
7-8—Louisville, Ky., Kentucky Petroleum Marketers Association, Annual Fall Conference.
13-16—San Francisco, Calif., North American Gasoline Tax Conference.
15-17—Atlantic City, National Petroleum Association, annual meeting, Hotel Traymore.
16-19—Taft, Calif., Pacific Oil Show and Black Gold Festival.
27—Cleveland, Ohio, American Gas Association, nineteenth annual convention.
29-30—Cleveland, Ohio, Ohio Petroleum Marketers Association, Fall Conference, Hotel Carter.

September—October

27-Oct. 1—Rochester, National Association of Petroleum Retailers, fifth national convention.
30-Oct. 1.—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.
11-15—Kansas City, Mo.—Twenty-sixth National Safety Congress and Exposition.
11-16—Houston, Tex., Oil-World Exposition.
12-14—Chicago, Ill., National Oil Marketers Association Convention, Stevens Hotel.
13-14—Indianapolis, Ind., Indiana Independent Petroleum Association, annual fall convention, Hotel Severin.
14-16—Pittsburgh, Pa., mid-year meeting, American Association of Petroleum Geologists, William Penn Hotel.
14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.
18-22—Atlantic City, N. J., American Welding Society, Eighteenth Annual Meeting and Welding Exposition.
21-22—Traverse City, Mich., Michigan Petroleum Association.
26—New York, Oil Trades Association of New York.
28—New York, S.A.E. Annual Dinner, Commodore Hotel.
29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

October—November

27-Nov. 3—New York, National Automobile Show, Grand Central Palace.

November

9-12—Chicago, American Petroleum Institute, eighteenth annual meeting, Stevens Hotel.
8-12—Chicago, American Petroleum Institute, Eighteenth Annual Meeting, Stevens Hotel.
16—New York, Oil Trades Association of New York.

December

6—Memphis, Tenn., National Asphalt Congress.
6-11—New York, Exposition of Chemical Industries, Grand Central Palace.
8-10—Flint, Mich., S.A.E. National Production Meeting.

1938

March

16-18—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists, Roosevelt Hotel.

April

17-21—Dallas, Tex., American Chemical Society.

CLASSIFIED ADVERTISING

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER
Patents Obtained — infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 2014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to any one, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

PATENTS SECURED. Low cost. Reasonable Terms. 72-page book and advice free. Reg. Pat. Atty. L. F. Randolph, Dept. 748, Washington, D. C.

For Sale—Maps

SUCCESSFUL OIL OPERATORS
Are Using
ZINGERY OIL MAPS
Our Up-to-Date Lease and Fee Ownership Maps of Counties and Combination Development Maps Save Time and Money.
WRITE FOR DESCRIPTIVE FOLDER

1937 Revised Edition Map of State of Texas, eastern N. M., parts of southern Okla., SW Ark. and La. shows Oil and Gas Fields in color, Counties and County seat and elevations, co-ordinated alphabetical index of fields and counties.
Price $1.00 postpaid
ZINGERY OIL MAP COMPANY
Fair Building Fort Worth, Texas

SOUTHWESTERN UNITED STATES
Includes all of following states: Texas, Louisiana, Mississippi, Arkansas, Oklahoma, Kansas, also Eastern New Mexico. Shows all oilfields by name and location. Alphabetically arranged list on margin of all discoveries these States during 1936. Lithographed. Size 3 x 4 ft. $1. Same map with pipe lines to date, white print with blue lines $7.50. Send for illustrated catalog describing 400 ownership and field maps in Texas and Louisiana.
ZINGERY MAP COMPANY
Houston, Texas.

LATE MAP of Mid-Continent oil fields. 54 x 54. Shows counties, fields, pipe lines, major and minor geological faulting. Special, $5. This is NOT a lithograph. Oil City Map Co., Fort Worth, Texas.

Mailing Lists

ROYALTY INVESTORS, by deed. Speculators in low priced leases. Both by states. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

Royalties—Production

BUTLER COUNTY, KANSAS, ROYALTY

Interest for sale by drilling contractor.

Under 80-acre lease with well now drilling.

(Offset well has produced for past 3½ years).

A limited amount offered for the purpose of meeting drilling cost.

RECORDABLE ASSIGNMENT OF INTEREST TO BE MADE DIRECT TO PURCHASER.

1/240th Interest $200.00.
1/480th Interest $100.00.

W. H. SCHWARTZ, DRILLING CONTRACTOR
Residence 214 North Estelle Street. Wichita, Kansas.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Addresses Wanted

WILL PAY CASH for names and addresses of production supts. and engineers. Box 2603, Tulsa, Oklahoma.

Royalties—Production

Oil Royalties and Oil and Gas Leases Bought and Sold
E. T. Marion
1109 Petroleum Building
Midland, Texas.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

Royalties—Production

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Oklahoma.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
In
Oil Royalties.
522 Fifth Avenue, New York, N. Y.

PERMIAN BASIN Royalties, fee lands, and leases, bought and sold. L. Wesley Read, Bush Building, Lubbock, Texas.

250a GRADY COUNTY Royalty 4N-5W. Priced to sell. Gypsy drilling deep test. Will exchange few acres to scatter bets. A. N. Wooldridge, 904 First National Bldg., Oklahoma City, Oklahoma.

ROYALTY to offer in LEA COUNTY, NEW MEXICO, and YOAKUM COUNTY, TEXAS. J. W. Wallrich, Lovington, N. M.

PROD. ROYALTIES from ZISTERSDORFER OILFIELD (Austria). Production from TWELVE oil sands. 1/3200th Interest $3850.00 net. (Basis $1000/R.A.). HENRI BRANDLI, LUGANO (Switz.).

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

CLASSIFIED

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma